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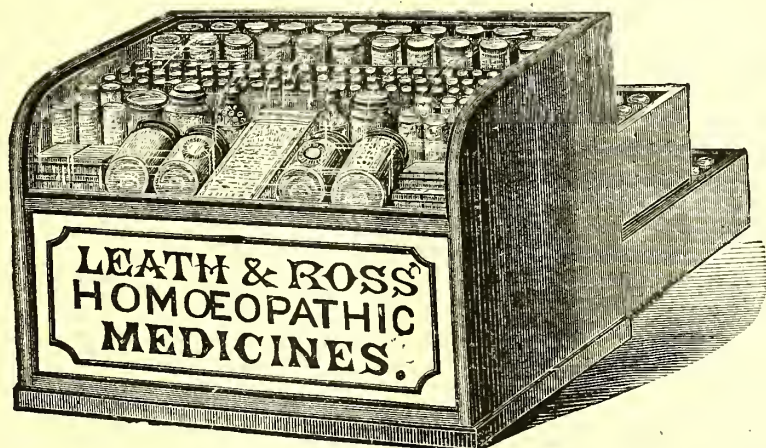
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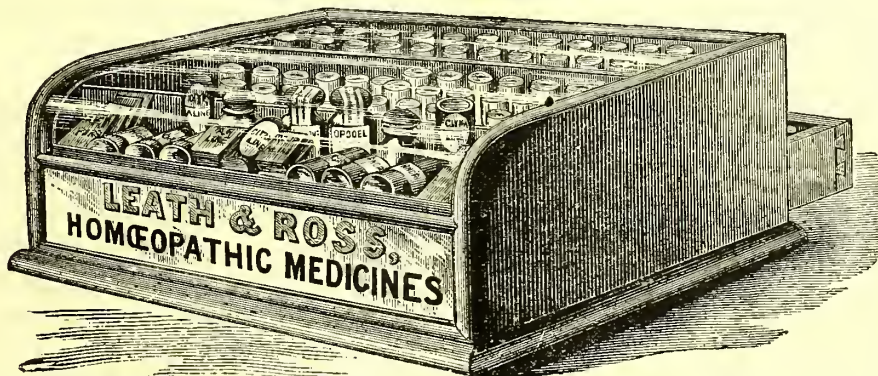
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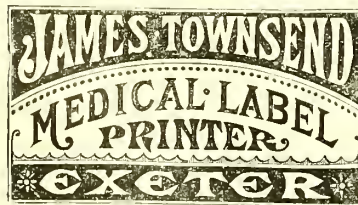
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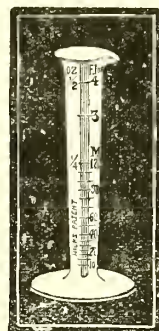
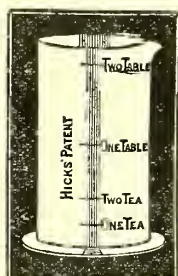
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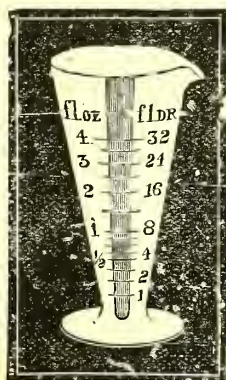
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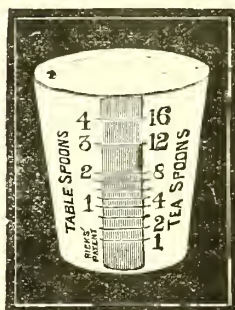
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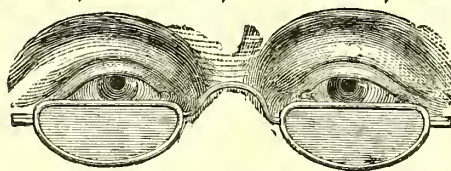
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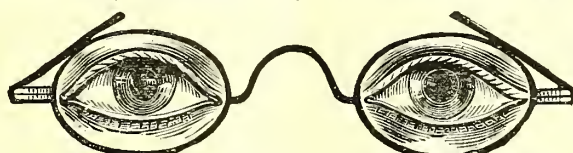
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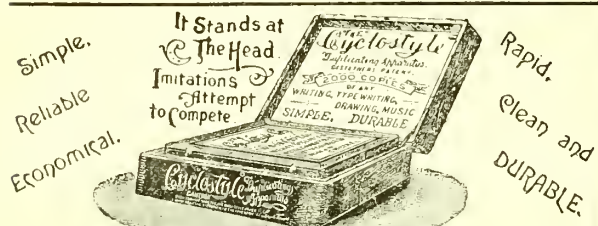
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A new and simple mode of ascertaining equivalents without the working of decimals, requiring no writing except the answer. Series A, for the conversion of Weights and Fluid Measures of the Metric System into English. For the use of Medical Students, Chemists, &c.

Price 3s. 2d., Post free.

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Medical Label & General
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Arranged by H. BELCHER THORNTON.

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Per Packet of 500 sheets,
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On contact with
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DISINFECTS and DEODORIZES
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A fresh Disinfecting Powder. It is a combination of soluble Chlorides and Camphor.

THE ADVANTAGES CLAIMED FOR IT ARE—

It is free from Poison. It is free from Smell (except a slight odour of Camphor). It is Soluble in Water
It is White in Colour. It is not injurious to any fabrics. It is Effectual and Cheap.

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Professor WANKLYN says:—"It is a most powerful disinfectant."
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IMPERIAL HAIR DYE.

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ONE LIQUID. — Harmless, Perfect, Permanent, and free
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Guaranteed to contain no lead, or any other noxious ingredient.

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ORIGINAL & BEST BASIS
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Facsimile of Label. Mutton, Beef, Veal, and Deer Suet and Beef Marrow,
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EXCHANGE COLUMN.

This section of "The Chemist and Druggist" must be closed for press by Thursday noon of each week. Remittances payable to EDWARD HALSE.

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Advertisements in this department must be paid for in advance. From this rule no deviation can be made. Insertions are charged at the rate of 3d. per word, provided the advertiser attaches his name and address, for each word of which he must also pay at the same rate; or if he pays 1d. per word, his name and address will be registered and a figure attached to his advertisement. All correspondence referring to that figure must be addressed to "The Publisher of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C., and the figure must be distinctly endorsed upon the envelope. Letters will then be forwarded to their proper destination. A price is counted as one word, as e.g., £1 10s. 6d.

DEPOSIT OF MONEY.—In order to ensure safety we offer the following system:—The purchaser of anything advertised in the Exchange Column may remit the amount to us, accompanied by a commission of 6d. if the amount is £3 or under; and 1s. if over that sum. We acknowledge receipt of deposit to both parties, and hold the money until we are satisfied that either the goods are returned to their original owner or the purchase is completed.

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Reliable recipes, 6d. each; full set of 130 neatly copied in book, 7s. 6d.; send for list. "Chemist," Edwards, Wye, Kent.

One dozen first-class recipes for articles in daily demand, used in some of the leading English houses; sent post free for 2s. 6d., J. T. Webb, 77 Dover Street, Belfast.

A Bargain.—Mixed paints, enamel paints; Boot's practical commercial receipts for sale. Address, S. A. Atkinson, 352 Ashton Old Road, Openshaw, Manchester.

How to make money.—Send 1s. 6d. for any three of the following valuable recipes, easily made, full directions. "Digestive Syrup," vastly superior to Seigel's, more pleasant taking, real medicinal worth, half profit; "Tic Specific," cures instantly when all other remedies fail, acts like magic, without danger; "Embrocatio Alb.," creamy white inseparable emulsion (like Elliman's), equally good for man or beast; "Hop Tonic," better every way than American, grand liver tonic, brilliant, permanent, pleasant, under 1s. pint; "Glycerine Cream," elegant sea-side requisite, cooling and refreshing, preferred to Becham's, pays splendidly; "Herbalade," concentrated extract like Mason's 6d. bottles, costing half, make 5 gallons of brilliant, sparkling, appetising, thirst-allaying, and comforting drink, once tasted always wanted. T. Brooks, Chemist, Louth, Lincs. My recipes have cost over 200l. List free.

Apparatus.

Halce's 12-cell portable galvanic apparatus, cost 10 guineas; slightly out of order; what offers? Crow, Chemist, Berwick.

Literature.

Chemist and Druggist and Journal volumes, 2s.; odd monthlies, 3l.; weekly, 1d.; offers. Williams, Chemist, Coleford, Gloucester.

Price, Chestnut Walk, Worcester, offers Wills's or Sonthall's "Materia Medica" specimens, 3s. 6d.; Attfield's "Chemistry," 2s.

Chemist and Druggist, 1873 to 1887 inclusive, well bound, quite clean, and in good condition; price 3s. 6d. per vol. 1873 to 1880; 4s. per vol. 1881 to 1887. "Chemist," 9 Bank Buildings, High Street, Wandsworth.

Shop Fittings.

For sale, shop fittings, good as new; cost 50l.; what offers? Modlen, Gillingham Chatham.

Best glass ebonised case, 25s.; height, 8 in.; width, 23 in.; length, 18 in.; pair brass counter scales, box end, Avery's, with mahogany stand, 25s. C. H. Swift, Chemist, Bradford Road, Huddersfield.

Miscellaneous.

Several expensive enemas, breast pumps, &c., never used, value 120s.; what offers? 3/2. Superior microscope slides in great variety, 5s. dozen; list; approval. Henry Ebbage, 344 Caledonian Road, London.

Gum, 8d. and 1s. lb., picked 1s. 6d. lb.; arrow-root (finest), 5d. lb.; senna at 2½d. lb. Drug Stores, 295 Old Street, E.C.

About 130 Bradbury's fly powder; 80 sheep dip; 100 foot-rot liquid; 3 boxes ozonic powders, some damaged; any reasonable offer. Particulars, Rook, Chemist, Sittingbourne.

One gross Davies' 3d. knife polish; 8 dozen Wieton's baking powder; quantities sundries; 25s. the lot, bargain. 19 Mosely Road, Birmingham.

Surplus.—5 gal. drum sanitary fluid, like Jeye's, 12s. 6d.; 2 gross watch smelling bottles, filled, labelled, 2s. doz., 20s. gross; 500 sandal oil capsules, Hooper's flexible, 15s.; several lots of patents, sundries, drugs; lists free. Gillman, 5 Wrotham Road, N.W.

WANTED.

Bougie mould for 12. Anthony S. Buck, Children's Infirmary, Liverpool.

"B. P.," 1885, Wills' "Elementary Materia" and "Analysis," latest editions, Robin, Bridgead, Perth.

Pharmaceutical Journal, posted Monday nights. State price per quarter-year to 2/37.

Counter scales and weights, 10 lb. size, as Maw's fig. 4; also 4 either 6 or 8 gal. carboys. Full particulars, Robinson, Chemist, Hull.

Dental.—A few good second-hand specimens of artificial teeth. Parkins, 267 Chapel Street, Salford.

British Journal Dental Science, 1884, 1885, 1883, 1887; also *Dental Records*, back numbers. Watt, Chemist, West Hartlepool.

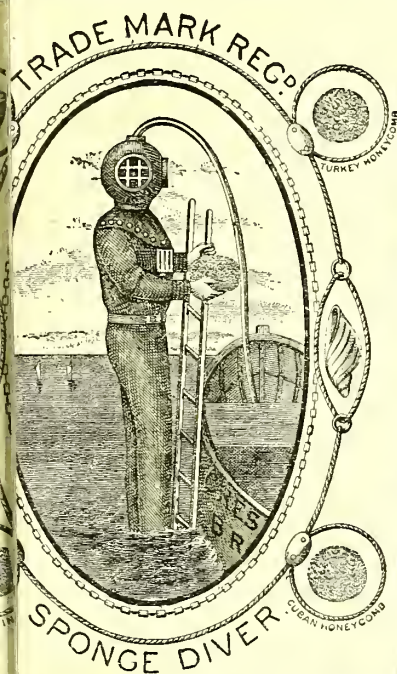
Old gold, silver, and dental metals; full assay value given in cash or high-class mechanical work. Entwisle, Dentist, 39 Shaw Street, Liverpool.

OUR WEEKLY SUPPLEMENT.

We have prepared a set of forms for small advertisements (assistants wanted, businesses for disposal, Exchange column, &c.). With these are attached tables of useful reference matter (Sale of Poisons, Postal Information, Annual Licences, Metric Weights, Measures, Medicine Stamps, Law and Public Offices, &c.). We shall be glad to send one of these sets to any subscriber who will send us an addressed postal wrapper (bearing a halfpenny stamp). As the object of this production is to encourage the insertion of such advertisements as we have named in THE CHEMIST AND DRUGGIST, we hope this offer will be taken advantage of chiefly by those subscribers who are willing to use this journal whenever opportunities occur.

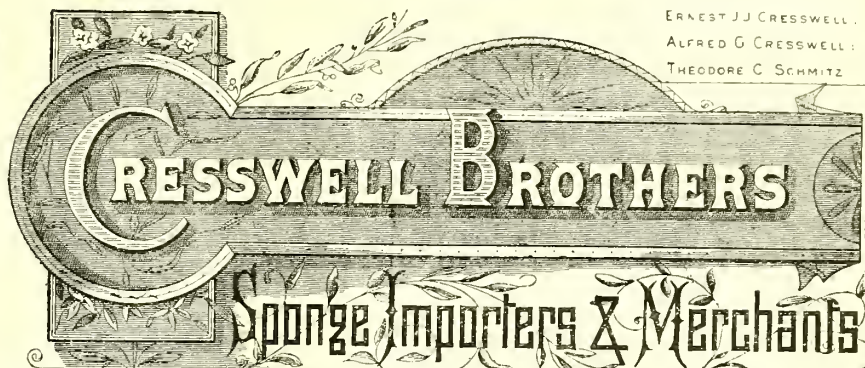
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Telegraphic Address—"CUBANS LONDON."

FREDERIC CRESSWELL.
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SPONGES OF EVERY DESCRIPTION DIRECT FROM
GREECE, TURKEY, THE BAHAMAS, FLORIDA & CUBA

2 RED LION SQUARE,

LONDON, W.C

(Next to Church)

ALSO AT 1 & 13A RED LION SQUARE.

IMPORTANT NOTICE TO THE TRADE.

New Wholesale Price List of Sponges.

CRESSWELL BROTHERS have just published the most comprehensive Price List of Sponges ever issued. It contains the lowest quotations for every variety, with special illustrated and descriptive matter, and a concise natural history of the sponge of commerce. All buyers should at once write for it.

OPINIONS OF THE TRADE JOURNALS.

From **THE CHEMIST AND DRUGGIST**, July 28th, 1888.

From Messrs. CRESSWELL BROTHERS, of 1 and 2 Red Lion Square, the famous Sponge dealers, we have a full and well illustrated price list of all sorts of sponges. Besides prices, this circular gives a great deal of information respecting sponges, with details of the natural and commercial history of the article. Several of the engravings in this list are produced by a new process, and the list itself is, we believe, the most complete, and contains more information than any which has been previously issued by any sponge house. Sponges are said to be now cheaper on the market than ever before, and Messrs. CRESSWELL BROTHERS assure us that they give the trade the full benefit of the lower prices.

From **THE BRITISH AND COLONIAL DRUGGIST**, July 28th, 1888.

CRESSWELL BROTHERS' SPONGE PRICE LIST.—This is a well got-up and attractive pamphlet, printed from a striking arrangement of type. It contains quotations for additions in assortments and kinds, particulars of reductions in prices, prices new and beautifully executed illustrations, a concise natural history of the sponge, and press opinions. The list is worthy in every way of the reputation of the firm.

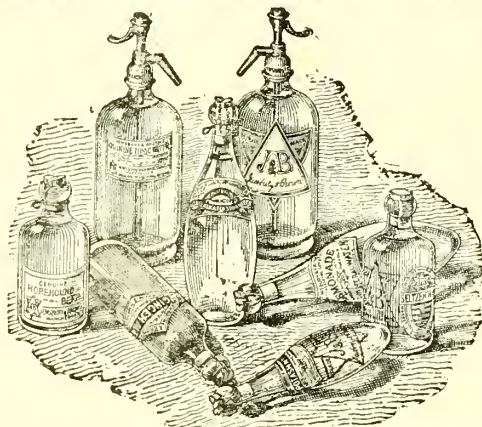
CRESSWELL BROTHERS, 1, 2 & 13a Red Lion Sq. (next to Church), London, W.C.

No connection whatever with a Company trading under a similar name in the same square.

JEWSBURY & BROWN'S (MANCHESTER) SPARKLING TABLE WATERS,

UNRIVALLED FOR PURITY AND QUALITY.

SODA WATER.
SELTZER WATER.
POTASH WATER.
LITHIA WATER.
SIMPLE
AERATED WATER.



LEMONADE.
GINGER ALE.
QUININE TONIC.
GINGER BEER.
HOREHOUND BEER.

EXTRACTS FROM ANALYTICAL REPORTS.

"The examination of the Waters which I have made has satisfied me that they have been prepared with the greatest care, and are of excellent quality."

FRANÇOIS JONES, F.R.S.E., F.C.S.

"On the whole, I have no hesitation in stating that your Aerated Waters are of the highest standard of purity which is practically attainable."

LOUIS SIBBOLD, F.I.C., F.C.S.

"The Lemonade is, for flavour and general excellence, superior to any similar compound which I have examined, and contains no acid but Citric Acid."

"I took a sample of the water used in your manufactory, in the preparation of the Aerated Waters, and found it, as was the case with the completed compounds, entirely free from lead, copper, or any injurious matter whatever."

C. ESTOVRT, F.C.S., F.C.I.

J. & B.'s Syphons are mounted with PURE BLOCK TIN, thus ensuring absolute immunity from dangerous metallic contamination.

113 MARKET STREET, and 44 DOWNING STREET, MANCHESTER.

GLASS WOOL

For Filtering Acids, Alkalies and other Corrosive Liquids, in large or small quantities.

ASK FOR PRICES.

MAWSON, SWAN & WEDDELL,
NEWCASTLE-ON-TYNE.

MAWSON'S FILTERS

(IMPROVED PATENT).

All Filtering Medium now manufactured and tested on our premises.

THE MOST SIMPLE AND EFFICIENT FILTER KNOWN.

MAWSON, SWAN & WEDDELL,
NEWCASTLE-ON-TYNE.

BY ROYAL LETTERS PATENT.

HASSALL & CO.'S PHOSPHO-CITRIC ACID

Is the Best, Purest, and most Economical Agent for Acidulating all Saccharine Beverages.

Price only 10d. per lb., in 9 and 18 gallon casks; 1s. per lb. in small quantities.

One Ounce Measure is equal to One Ounce of Citric. It produces a higher class Beverage, and shows an economy of between £6 and £7 per cwt.

We do not ask for an order, we merely solicit the favour of a trial.

3-oz. Sample for Postage (3 stamps), or 14 lbs. on approbation.

PAMPHLET GRATIS.

UNSOLICITED TESTIMONIALS.

We are pleased to be able to testify that your Phospho-Citric Acid is satisfactory under the most severe trials. We have placed Manufactured goods in which your Acid was used in a refrigerator for months, and also for nine months in a stove in which the temperature stands at over 150° day and night, and the bottles when examined to-day were as bright as the day they were put in. ———, LONDON.

LEMON STREET, ABERDEEN.

I have pleasure in bearing testimony to the fact that first-class waters are produced, with greater body and finer fruity flavour, at half the cost of Citric; and further that your Acid is free from all traces of LEAD, generally found in the crystals.

I am persuaded that your Acid will ultimately command the Mineral Water Trade.

Yours faithfully, WM. THOMSON.

"And may I also be permitted to add my testimony to the excellence of your Phospho Citric Acid; I consider it far and away preferable to Citric."

C. H. ORTON, STOKE GOLDING.

FERMENTATION.

When Fermentation is present, Saccharine Beverages made with this Acid will keep sound and bright several days longer than those made with Crystal Acids.

HASSALL & CO.
YORK ROAD, KING'S CROSS, LONDON.

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NESTLE'S MILK FOOD FOR INFANTS.

ALSO WELL ADAPTED FOR CHILDREN AND INVALIDS.

Prepared at **VEVEY, SWITZERLAND.**



The only Perfect Supplement and Substitute for
Mother's Milk.

Easy of Preparation—requires merely the addition
of water.

UNIVERSALLY RECOMMENDED BY PHYSICIANS.

PRIZE MEDAL, International Health Exhibition, 1884. AWARD OF MERIT, International Medical and Sanitary Exhibition, London, 1881.

DIABETES.

VAN ABBOTT'S GLUTEN BREAD.

AND ALL SUITABLE FOODS FOR DIABETIC PATIENTS.

VAN ABBOTT'S ELIXIR of SACCHARIN and SACCHARIN PERLES for SWEETENING TEA, COFFEE, &c., are perfectly harmless to DIABETICS and all to whom Sugar is injurious.

G. VAN ABBOTT & SON are Manufacturing GLUTEN CAKES, BISCUITS, &c., SWEETENED with SACCHARIN for DIABETIC PATIENTS.

Full particulars on application. PAMPHLET, with DIABETIC and other DIETARY TABLES, COOKING RECEIPTS, Price List, &c., Post Free.

G. VAN ABBOTT & SON,

DIABETIC, INVALID, & INFANT DIETETIC DEPOT, 6 Duke St. Mansions, Grosvenor Sq., London, W.

TELEGRAPHIC ADDRESS—"GLUTENS LONDON."

THIRTY-SIX PRIZE MEDALS AWARDED TO THE FIRM.

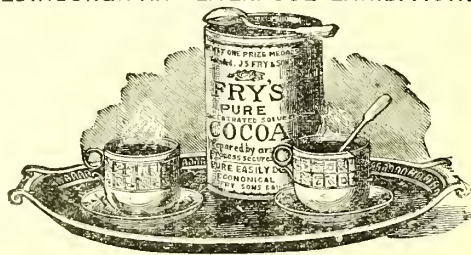
FRY'S

Pure Concentrated

COCOA

Prepared by a new and special scientific process securing extreme solubility, and developing the finest flavour of the cocoa.

GOLD MEDALS
EDINBURGH AND LIVERPOOL EXHIBITIONS



TRADE MARK.

J. S. FRY & SONS, BRISTOL, LONDON, & SYDNEY, N.S.W.

To H.R.H. The Prince of Wales, The Empress of Germany, &c.

BRAND & CO.'S

PEPTONES

OF

BEEF,

MUTTON,

VEAL,

AND

CHICKEN.



KERFOOT'S PEARL CACHOUS.

THESE beautiful little lozenges, perfectly spherical in form, weighing about 400 to the ounce, of exquisite flavour and great strength, are the most popular and perfect breath lozenges ever introduced; unlike the ordinary flat lozenges, these little PEARLS have no angles to attract dust and become soiled with a slight handling, consequently they can be carried in the purse or pocket, and are altogether more portable than ordinary lozenges.

The unique appearance and flavour of this novelty quickly ensured a large sale, and its success, as might have been anticipated, quickly brought to the front some worthless imitations, the sale of which can only result in disappointment to all concerned.

KERFOOT'S Pearl Cachous

are the only genuine PEARL CACHOUS: they are not only better looking, but are double the strength of the imitations, and buyers are therefore requested to order the original, and thus ensure a perfect article. They are elegantly put up in attractive one-pound bottles, and are an ornament to any Pharmacy. The following flavours are always in stock—

Clove Pink.	Lavender.
Ess. Bouquet.	Musk.
Frangipanni.	Rose.
Heliotrope.	Rondeletia.
Jockey Club.	Violet.

Price 2s. 9d. per lb. in 1-lb. bottles.

Eight bottles sent carriage free to any part of the Kingdom.

T. KERFOOT,
MANUFACTURING PHARMACEUTICAL CHEMIST,
Medlock Vale Works, Berry Street,
And Albion Works, Hague Street,
MANCHESTER.

London Depot, St. Paul's Chambers, 19 Ludgate Hill.
Agent, Mr. HENRY C. QUELCH.

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GOOD
VALUE

AND "BOROUGH" KETCHUP

THE GIANT 1d. BOTTLE OF SAUCE.
LARGEST IN THE TRADE.

In Half-Gross Boxes, at 6/6 per Gross.*

"BOROUGH" KETCHUP, WORCESTER, HARVEY, YORKSHIRE,
OR READING SAUCE.

1d. Sample Bottles, dozen parcels	per gross 5/	extra quality 6/
1d. Giant Bottles, dozen parcels	" 5/6	" 6/8
1d. Giant Bottles, dozen parcels	" 6/	" 8/
1d. Bottles (flat or round), reputed 1/2-pint	" 6/6*	" 8/
1d. Bottles (flat or round), reputed 1/2-pint	" 16/	" 24/
1d. Bottles (flat or round), reputed pint	" 26/	" 32/
1d. Imperial Round Stoppered Bottles	" 30/	" 36/
1d. Imperial	" 50/	" 60/
12 1/2-gallon Casks (casks free).. ..	each 20/	" 32/

ROYAL CAFÉ SAUCE.

In 8-oz. square-stoppered bottles, 48/ per gross.
A rich, fruity Sauce of fine flavour, and worth especial attention, as being the most saleable in the market.

Samples of any kind Sent Free of all Cost by

PETER TYRER,
The "Borough" Ketchup and Sauce Maker,
70 LONG LANE, BOROUGH, LONDON, S.E.
SCOTCH AGENCY: 113 WEST NILE STREET, GLASGOW.
Also Sold by W. & C. PANTIN, Upper Thames Street, LONDON, E.C.
BURGOYNE & CO., 16 Coleman Street, London, E.C.
JOS. TRAVERS & SONS, 119 Cannon Street, London, E.C.

E. FOUGERA & CO.,

No. 30 NORTH WILLIAM STREET,
NEW YORK, U.S.A.,

Importers of and Agents for the Principal
FOREIGN MEDICINAL PREPARATIONS
AND SPECIALTIES.

AGENCIES AND CORRESPONDENCE SOLICITED.



A PURE CUP OF TEA

Is obtained in 3 mins. by means of
HOBBS' Patent Antitannic Infuser.
Better Flavour and Less Tea used than with the teapot.

READ OUR PAMPHLET. } GRATIS and POST FREE.

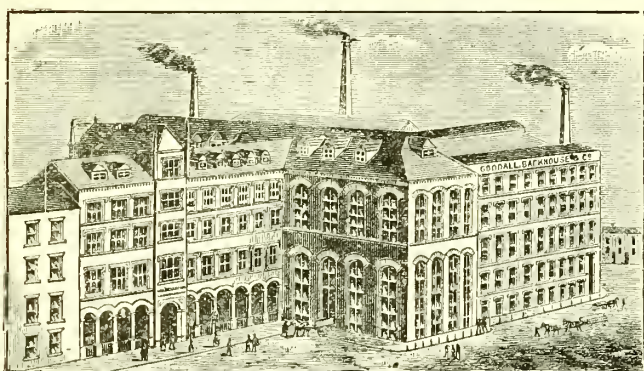
For Single Cups of Tea HOBBS' INFUSER is unequalled. Its cost is soon repaid by the saving in the quantity of tea used. Price 1s. 6d. from all China Dealers, Grocers, Chemists, &c., or post free direct, 1s. 9d.

HOBBS' INFUSER CO., Limited,
Offices:—12, WOOL EXCHANGE, LONDON, E.C.; CREWKERNE; and 62, NORTH STREET, BRIGHTON.

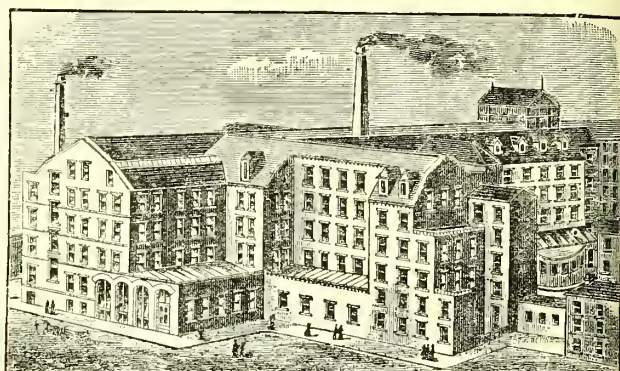
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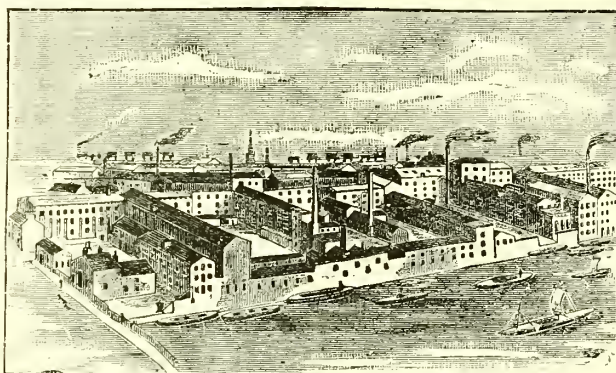
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Warehouse and Offices, White Horse Street—West View.



Warehouse and Offices, White Horse Street—South and East Views.



Manufactory, Sovereign Street. Frontage 1,043 feet.



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YORKSHIRE RELISH,

MOST DELICIOUS SAUCE IN THE WORLD.
In Bottles, 6d., 1s., and 2s. each.

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THE BEST IN THE WORLD.
1d. Packets; 6d., 1s., 2s., and 5s. Tins.

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ONE 6d. TIN IS EQUAL TO 25 EGGS.
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DELICIOUS CUSTARDS WITHOUT EGGS.
In Boxes, 2d., 6d., and 1s. each.

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BEST TONIC YET INTRODUCED.
Bottles, 6d., 1s., and 2s. each.

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DELICIOUS BLANCMANGE IN A FEW MINUTES. In Boxes, 6d. and 1s. each.

Proprietors—GOODALL, BACKHOUSE & CO., LEEDS.

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Monthly Price List of Patent Medicines, Grocers' Sundries, &c., will be sent post-free on application to

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MAKES THE BEST GINGER BEER.
Packets, 3d. and 6d. each.

GOODALL'S BRUNSWICK BLACK,

FOR PAINTING STOVES, GRATES, IRON, TIN, &c.
6d. and 1s. Bottles.

GOODALL'S LAVENDER WATER,

A RICH AND LASTING PERFUME.
In Bottles, 1s., 2s., 5s., and 10s. 6d. each.

GOODALL'S PLATE POWDER,

FOR POLISHING AND CLEANING ALL METALS.
Boxes, 6d., 1s., and 2s. each.

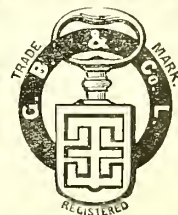
GOODALL'S CALF'S FOOT JELLY,

PURE, STRENGTHENING, AND PALATABLE.
In Bottles, 6d., 1s., and 2s. each.

GOODALL, BACKHOUSE & CO.



WHOLESALE & EXPORT DRUGGISTS,



Druggists' Sundrymen, Patent Medicine Dealers,
Drug and Spice Grinders, Distillers and Drysalters.

MANUFACTURING & ANALYTICAL CHEMISTS,

IMPORTERS OF

Olive Oil, Castor Oil, Cod-liver Oil, Essence of Lemon, Cream
of Tartar, Bees Wax, Dalmatian Insect Flowers, &c., &c.

SPECIAL MANUFACTURES—

Acetate of Amyl.

„ of Lead.

Acetic Ether.

Alcohol, Absolute.

Ammon. Bromid.

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„ Nitrate.

Citrate of Iron and Quinine.

„ of Potash.

Decoctions, Infusions, & Liquid

Extracts (concentrated in vacuo).

Ferri Iodid.

„ Sulph., Pure.

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Phosphoric Acid.

Potass. Iodid.

Potass. Bromid.

Salts of Lemon.

Sodii Bromid.

Spt. Æther. Nit.

„ Ammon. Co.

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AND ALL PHARMACEUTICAL PREPARATIONS.

CITRATE OF MAGNESIA AND LEMON KALI.

HERB BEER EXTRACT AND COMPOSITION ESSENCE.

MAKERS OF ALL KINDS OF

PLAIN ROUND, SQUARE, AND OBLONG TINS.

PROPRIETORS AND SOLE MANUFACTURERS OF

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KAYBERRY'S LUMBAGO PILLS,

AND

FREEMAN'S SYRUP OF PHOSPHORUS.

DETAILED PRICE LIST ON APPLICATION.

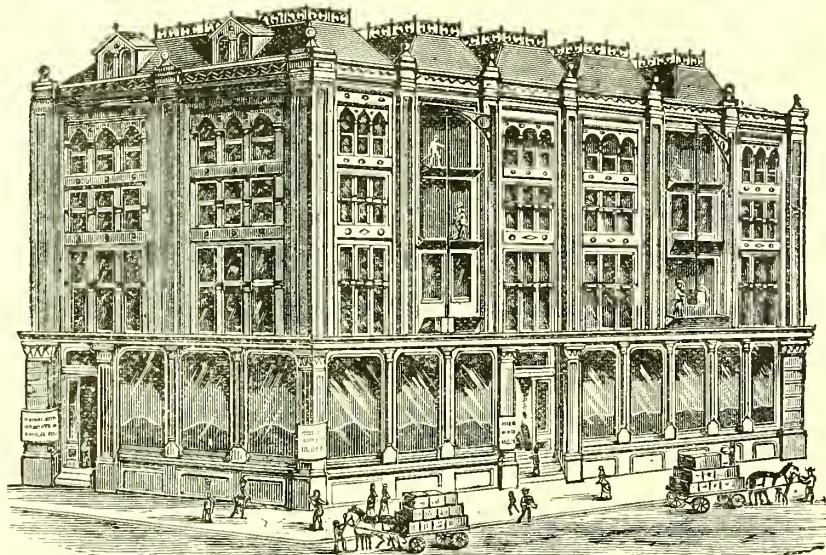
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THE PREMIER TEA OF INDIA AND
CEYLON, IS THEIR SPECIAL IMPORTATION
AND THE PERFECTION OF TEA.

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OFFICES AND DUTY PAID WAREHOUSES.

For Retail at 1s. 8d., 2s., and 2s. 6d.

In Lead Packets, $\frac{1}{4}$ lb., $\frac{1}{2}$ lb., and 1 lb.

Terms of Agency, and Samples of the Tea, on application.

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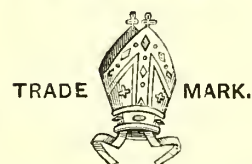
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TEA.**

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TRADE MARK.

Mitre "Broken Leaf"	1 4
Mitre "Broken Am. Pekoe" ...	1 8
Mitre "Thrift" (whole leaf)	1 8
Mitre "Kee-Mun" ...	2 0
Mitre "Amgoorie" ...	2 6

Mitre "Broken Leaf"	1 4
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Mitre "Thrift" (whole leaf)	1 8
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Framed Show Cards, Enamelled Iron Tablets, Posters, Window Transfer, and Handbills with Agent's Name on supplied free. Newspaper and Railway Station Advertisements to suit the requirements of Agents. Applications for Agencies where unrepresented will receive prompt attention. Price Current and Pamphlet, with Terms, post free.

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WHERE NOT REPRESENTED.

FRAGRANT AS THE FLOWERS OF SPRING:

Packed in New Patent Air-tight Circular Boxes. Most Novel and Attractive Package.

In $\frac{1}{4}$ -lb., $\frac{1}{2}$ -lb., and 1-lb. Boxes, to sell Retail at 2/-, 2/6, and 3/- per lb. Set of three $\frac{1}{4}$ -lb. samples post free for 2/- in stamps

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Are prepared to entertain a limited number of applications from Traders of undoubted standing to be appointed Agents or the sale of the Company's Teas. A Liberal Commission will be allowed. The Agency will be found to be a valuable one, entailing little, if any, trouble to the Agent, in addition to which it will be the means of bringing numerous customers to him, who will patronise his general business.

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Offices—21 MINCING LANE, LONDON, E.C.

PEARSE & WHEATLEY, 42 MINCING LANE, LONDON

(Telegraphic Address—PACIFICUS LONDON.)

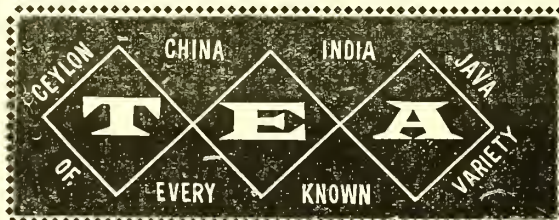
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SUPPLY AT LOWEST MARKET RATES EITHER FOR HOME CONSUMPTION OR EXPORT

In original Boxes, Half Chests, or Chests, as imported.

Duty Paid or under Bond.

Prices and Samples on application.



Or in Leaden or Foil Packets ($\frac{1}{4}$ -lb., $\frac{1}{2}$ -lb., 1-lb., &c.),

Or in kilos., $\frac{1}{2}$ kilos., or fractional parts, for countries using these weights.

Fancy Tin Boxes any size or weight.

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In Boxes, 20 lbs. or 40 lbs.; $\frac{1}{2}$ -Chests, 60 lbs.; or Chests, 100 lbs. 60 lbs. carriage paid to any Station in England or Wales. Terms—Net Cash with order.

CEYLON TEAS (PURE)—
IN LEAD PACKAGES ($\frac{1}{4}$ -lb., $\frac{1}{2}$ -lb., or 1-lb.)
Most attractively labelled.

Culloden	Grange	Shen	Orwell	Mooloya	Pen-y-lan	St. Ley's
1/4	1/6	1/8	1/10	2/2	2/6	2/9

Duty-paid Prices.
(For Export under Bond, 6d. per lb. less.)

Export Department.—Teas or Coffees in Bond. Shipped to any part of the world. Terms, f.o.b. London; against banker's credit or remittance
Samples, Price Current, and every information on application.

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Rio, Santos, Costa Rica, Mocha, East India, Mysore, Naidoobatum, Jamaica, Porto Rico, Ceylon, Guatemala, Manila, Java, &c.



ROASTED COFFEES (Duty Paid).

10½d., 1/1, 1/2, 1/3, 1/4; Mocha, 1/5.

In Bags, 28 lbs., 56 lbs., or 112 lbs. net. Bags free
Also supplied Ground in 7 lb., 14-lb.,

28-lb., or 56-lb. tins.

THE NEW FRENCH COFFEE—CAFE FRANCAIS
AT MARKET PRICES.

to sell at 10d., 1/1, 1/4, and 1/6, in $\frac{1}{4}$ -lb., $\frac{1}{2}$ -lb., and 1-lb. Canisters.
Most tastefully labelled, without any firm's name appearing.

PRIZE MEDALS AND DIPLOMAS
AWARDED**MILK IN POWDER**

UNSWEETENED OR SWEETENED.

The cheapest, purest, and most nutritious of all similar productions.

The Lancet says:—A very interesting and valuable preparation.*British Medical* says:—The preparation represents the highest possible degree of concentration which can be obtained, and is sure to be appreciated.*The Medical Press* says:—A milk which is with difficulty distinguished from fresh cow's milk.

CARL LAWINSKI, 50 Mark Lane, LONDON, E.C.

Amsterdam, London, & Zurich, Emden.

TEMPERANCE BEVERAGES.*A Sixpenny Bottle of***ADAMS'S EXTRACT OF HERBS**

Will make 8 gallons of sparkling, wholesome, and refreshing

PRIME HERB OR BOTANIC BEER,*Unequalled in strength and richness of flavour by any preparation made from fresh herbs.*

The Extract is very carefully manufactured, on the most improved scientific principles, from the herbs and plants gathered and dried at the proper season, when their virtues are in full vigour, thus retaining their invigorating and health-giving properties.

It makes an excellent beverage, giving natural flavour and colour, and a sparkling foam like bottled ale.

*In Bottles, 6d. to make 8 gals.; 1s. to make 18 gals.; and 2s. 6d. to make 50 gals.***ADAMS'S GINGER ALE ESSENCE**

makes a sparkling, refreshing, and invigorating beverage for summer and winter.

ADAMS'S SPARKLING FOAM PRODUCER.

One tablespoonful added to 2 gallons of the Herb Beer or Ginger Ale, just before bottling, gives a creamy foam like bottled ale.

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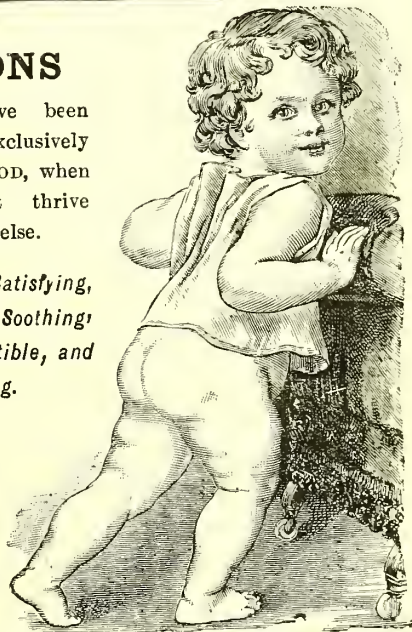
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Specially favourable terms to large Buyers from the
PROPRIETOR,

B. ADAMS, Mansfield, Notts.

**RIDGE'S
FOOD**is the BEST,
and has the
LARGEST SALE
in the World
of any Infant's
Food.**MILLIONS**

of Children have been brought up exclusively upon RIDGE'S FOOD, when they could not thrive on anything else.

*RIDGE'S FOOD is Satisfying, Strengthening, Soothing, Agreeable, Digestible, and Nourishing.*MANUFACTORY—
Ridge's Royal
Food Mills,
London, N.Telegraphic Address—
'RIDGE'S FOOD,
LONDON.'

Ridge's Food sets the babies on their legs, and makes them push along.

LIQUID PEPTONATE OF IRON (STERILIZED)

The best remedy for Anemia and in all cases where the stomach cannot bear iron in the ordinary forms. A wonderful stimulant to nutrition.

COLOURLESS PEPTONE OF MEAT (STERILIZED)

The only rational Peptone, free from microbes. Antibacteridian sterilization insures its complete preservation.

SAMPLES FREE TO MEDICAL MEN AND CHEMISTS ON APPLICATION.

Sole Makers: DENAEYER'S PEPTONES COMPANY, LIMITED, 118 Bishopsgate St. Within, LONDON, E.C.

"RAMORNIE."**LIEBIG'S**

Extract of Meat.

As supplied to the War Office.

1-lb. Jars	per lb.	6/2	..... per doz.	74/0	2-oz. Jars	per lb.	7/0	..... per doz.	10/6
1-lb. Jars	"	6/4	..... "	38/0	1-oz. Jars	"	7/8	..... "	5/9
4-oz. Jars	"	6/7	..... "	19/9	1-oz. Jars	"	8/0	..... "	3/0

Write for Detailed Price List to the Australian Meat Co., 9 and 11 Fenchurch Avenue, E.C.

6 lbs. Carriage Free.

TO AERATED WATER MANUFACTURERS

HAY'S

SOLUBLE ESSENCES

REGISTERED

ARE GUARANTEED TO BE THE FINEST IN THE MARKET.

HONOURABLE MENTION: INTERNATIONAL FOOD EXHIBITION, AGRICULTURAL HALL, LONDON, OCTOBER, 1880.

SOLO MEDAL: SOCIETY OF ARTS, PARIS, 1883.

HAY'S

HOP ALE ESSENCE.

"Supplies an excellent stomachic, appetising, and agreeable summer drink."

Brewers' Journal.

"For this Essence a brilliant future may be anticipated. It possesses characteristics very seldom to be met with."

Mineral Water Trade Review.

HAY'S HOP ALE.

"This is an excellent Non-Alcoholic beverage."

The Lancet.

"Evolves a delicious aroma of Hops."—*Medical Press.*



GINGER CHAMPAGNE.

(Made from Hay's Essence.)

"An excellent and most agreeable beverage."

The Lancet.

"Mr. Hay has caught the fine aroma of ginger with remarkable success. It is equally sparkling but more refreshing than its rival, the Royal French Beverage."

The Chemist and Druggist.

GINGER ALE.

(Made from Hay's Fortified Essence.)

"It pours out with as fine a 'head' as any glass of ale, and possesses all the fine aromatic flavour of the pure ginger."

The Chemist and Druggist.

HAY'S SOLUBLE ESSENCE OF JAMAICA GINGER.

A Pure Essence of the Finest Ginger.

Trade Price, 5s. per lb.; 12 lbs. and upwards, 4s. 6d.

HAY'S COMPOUND FORTIFIED ESSENCE OF JAMAICA GINGER. FOR FIRST QUALITY GINGER ALE.

Imparts an exquisite Ginger Aroma. Trade Price, 5s. 6d. per lb.; 12 lbs. and upwards, 5s. Quantity required, five fluid ozs. to each gallon of Syrup, making 106 10-oz. bottles.

HAY'S GINGER ALE EXTRACT.

FOR SECOND QUALITY GINGER ALE.

Imparts Pungency, Colouring, great

Brilliance, and an unusually Fine Ginger Flavour and Aroma. Trade Price, 4s. 6d. per lb.; 12 lbs. and upwards, 4s. Quantity required, three fluid ozs. to each gallon of Syrup, making 103 10-oz. Bottles.

HAY'S GINGER ALE ESSENCE. Highly Concentrated

FOR THIRD QUALITY GINGER ALE.

This Essence makes a Ginger Ale that is unsurpassed by the so-called finest Belfast. Trade Price, 9s. per lb.; 12 lbs. and upwards, 8s. 6d. Quantity required, half a fluid oz. to each gallon of Syrup, making 105 10-oz. Bottles.

HAY'S GINGER CHAMPAGNE ESSENCE.

This Essence is a combination of the finest flavours, and imparts with the Ginger a most exquisite aroma. Trade Price, 8s. per lb.; 12 lbs. and upwards, 7s. 6d.

HAY'S SOLUBLE ESSENCE OF MESSINA LEMONS.

No. 1. Highly Concentrated. Trade Price, 8s. 6d. per lb.; 12 lbs. and upwards, 8s. Quantity required, three-quarters fluid ounce to each gallon of Syrup, making 105 10-oz. bottles.

HAY'S SOLUBLE ESSENCE OF MESSINA LEMONS.

No. 2. A magnificent preparation. Makes an exquisitely fine Lemonade. Trade Price, 6s. 6d. per lb.; 12 lbs. and upwards, 6s. Quantity required, one fluid ounce to each gallon of Syrup, making 103 10-oz. bottles.

HAY'S LEMON FLAVOUR.

No. 1. An Exceptionally Fine Essence,

makes a delicious Lemonade, to which it imparts all the Fine Aroma and Flavour of the choicest Lemons. Trade Price, 5s. per lb.; 12 lbs. and upwards, 4s. 6d. Quantity required, one fluid ounce to each gallon of Syrup, making 106 10-oz. Bottles.

HAY'S LEMON FLAVOUR.

No. 2. A very fine Essence, prepared from the fresh fruit. Trade Price, 4s. 6d. per lb.; 12 lbs. and upwards, 4s. Quantity required, one-and-a-quarter fluid ounce to each gallon of Syrup, making 105 10-oz. Bottles.

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This Essence is made from the Choicest Hops grown, and is unrivalled for its peculiarly fine Hop flavour and aroma. Hop Ale made from this Essence has the full flavour of the finest Hops, and is a really appetising Bitter Beer. Trade price, 8s. 6d. per lb.; 12 lbs. and upwards, 8s. Quantity required, one fluid ounce to each gallon of Syrup, making 106 10-oz. Bottles.

For Orange, Vanilla, and all other Essences send for Price List.

[2]

The difference between preparations made from HAY'S ESSENCES and those made from the numerous SPURIOUS IMITATIONS of them bearing the name of SOLUBLE ESSENCES is most marked, and no manufacturer using the latter can compete with one using HAY'S PREPARATIONS, as is universally known.

Indentors, to prevent disappointment, should specify that the Goods are to be of HAY'S MANUFACTURE.

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BEVERLEY ROAD,
ENGLAND.

Telephone Number, 1852.

Telegraphic Address—CHEMICUS LONDON.

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NOTE.—The Folios shown in this Index are those at the FOOT of the Page, and NOT at the Top. This arrangement is necessary in order to meet the requirements of the Post Office.

Foot of Page	Foot of Page	Foot of Page
ADAMS, B. Extract of Herbs 21	FRITZ & CO. Salt Regal. Text 245	NATIONAL CHEMICAL CO. Children's Food 65
ALLEN & HANBURY'S Wholesale Druggists' COVER 216	FRY & SON Cocoa 11	NESTLE, H. Milk for Infants and Invalids 14
APOLLINARIS CO. (LIM.) Text 216	GASKELL, DEACON & CO. Chemicals 33	NEW CARBOLIC SANITARY CO. Disinfectant 61
ARMBRECHT, NELSON & CO. Cocoa Beans 41	GIBSON, R., & SONS Lozenges, Sugar, &c. 65	NEWBERRY, F. & SONS Wharfedale's Pills 21
ASSISTANTS WANTED Coloured Supplement 51	GODFREY & COOKE Tablets 34	NORTH MEDICINE CO. Coloured Supplement 51
ATKINSON & BARKER, Infants' Preservative 49	GOODALL, H. A., & CO. Spectacles 16, 17	ORRIDGE & CO. Coloured Supplement 51
AUSTRALIAN MEAT CO. "Ramonie" Extract of Meat 21	GOODALL, H. A., & CO. The "Idea" Tooth Brush 57	OSCAR, ANDRE & CO. Chemicals, Quinine, &c. 52
AYRTON & SAUNDERS Druggists' Sundries 63	GOVERNMENT SANITARY CO., THE Disinfectants 55	PATERSON'S CHEMICAL CO. Extract of Malt with Cod Liver Oil 35
BAILEY & SON Surgical Instruments, Trusses, &c. 32	GREEN, S. Singleton's Golden Eye Ointment 49	PEARCE'S SOAP Manufacturing Soda Candy, B. B. B. 35
BARNER, G. & CO. Crinoid Marking Ink 56	GREENSILL, T. S., & SON Perfumery 27	PEARSE & WHATELEY Tea and Coffee 20
BARKER & SON Engravers Text 245	GREGORY, W. Pine Devonshire Oils 55	PHILLIPS, G., & CO. Pure Spirits of Wine 58
BARNETT & CO. Perfumery 29	GRINDLEY & CO. Petroleum Jelly 61	POLLARD, A. W. Rubber Stamps 34
BARNETT & FOSTER, Foster's Patent Nozzle 57	HAGUE, J. J. Clinical Thermometers 61	POTZ & HENDRICKS Acetic Acid 51
BARNETT, R. H. Smelling Salts, The Purest 56	HALL'S WOOD VIOLET (E. R. Biggleston) Perfume 23	QUILL, H. B. Disinfectant 61
BAUMGARTNER, J. F., & CO. La Brillantissime 30	HARGREAVES, DR. K. A Practical Manual of General and Generative Diseases 6	QUILLIAM & CO. Plaster Makers 61
BEECHAM'S PILLS Cautious Verdict 44	HARKER, STAGG & MORGAN Drugs 46	RAIMES & CO. Breast Expander 51
BELL & STONE Printing 8	HASSALL & CO. Phosphoric Acid 13	RAIMES, CLARK & CO. Wholesale Druggists 45
BEWLEY & DRAPER (LIM.) Draper's Inc 34	HAY, W. Soluble Essences 22	RAIL, GEORGE L. Analytical Chemist 60
BIGGESTON, E. R. (J. R. Hall's) Wood Violet and Heliotrope Essences 23	HEARN, E. A., & CO. Watch Smelting Salt Bottle 37	RAPHAEL & CO. Spec. Pills 59
BIGG, T. Shoco Dip 56	HEILGERS, F. W., & CO. Quinine 33	RATTL, S., & CO. Emphoric 51
BOORD & SON Pure Spirits of Wine 56	HERBERT & HUBBARD, Pill-picking Machine 18	RICHFORD, E. M. Rubber Stamps 61
BOTWRIGHT & GREY Spectacles 7	HESELTINE, W., & SON Premier Tea 18	RIDGE, DR. FORD 21
BOWDLEAR, W. H., & CO. Glass Measures 7	HEWLETT & SON Liquor Sental Fav. 18	RIVEHEAD OIL MILLS CO. Nut Oil 40
BRECHER & CO. Pill Finishers 55	HICKS, J. J. Glass Measures 7	ROBERTS & CO. Concentrated Waters 28
BRODIE & BOURDAS, White Boule Powder 55	HOBBS' ANTIANIC INFUSER CO. 55	ROBINSON, B. Vapor Apparatus 55
BRAND & CO. Concentrated Beef, &c. 11	HOCKIN, WILSON & CO. Acne Methyl Cones 67	ROWLAND, L. Chloride of Gold 61
BRODIE, J. Hair Dye 9	HOOPER, B., & CO. Compressed Tablets 49	SAINSBURY, S. Lavender Water 60
BROOKS, PEEL & CO. 9	HOP BITTERS CO. Caution 45	SANFORD & SON Rat Poison 55
BURGOYNE, BURBIDGES & CO. Wholesale Druggists 41	HOHN & SON Patent and Trade Mark Agents 61	SANITARY WOOD WOOL Wood Wool Diapers 55
BURROUGHS, J. Spirits of Wine 55	HOLDEN, A. Hydrochloric of Quinine 23	SANITARY COMPANY (LIM.) Disinfectant Text 245
BURROUGHS, WELLS & CO. Solent 34	HOVENDEX & SONS Lloyd & Eucasia 24	SCHUTZE, F., & CO. Glycerine Syringes, B. B. B. Caps 51
BUSINESSSES FOR DISPOSAL Coloured Supp. 51	HUNYADI JANOS COVER 9	SELLERS, J. Glycerine Syringes, B. B. B. Caps 51
BUTTERY BROS. Coevert 51	HYGIENIC PAPER CO. Sanitary Toilet Paper 9	SHIPKOFF & CO. Oil of Rose 21
CATER, J. H. Di Integrators 61	HYDRI & CO. Altered Waters, Crushed Linseed 61	SHIRLEY, A. W. Menthol 31
CAYE, JOHNSON & CO. Spring Blossom Ceylon Tea 20	INGRAM & SON Bottles 55	SILICATED CARBON FILTER CO. Printing 8
CENTRAL SCHOOL OF CHEMISTRY AND PHARMACY 6	ISAACS, J. Peppermint 51	SILVERLOCK, K. H. Printing 8
CHESEBROUGH, THE, CO. 34	JACKSON, J., & CO. Peppermint 51	SMITH, W. F. Printing 8
CHURCHILL, J. & A. Handbooks 6	JEW-BURY & BROWN, Sparkling Table Waters 12	SMITH, W. F. Printing 8
CLARK, W. Specialities for the Horse, Stable, and Field 59	JHNS-SEN & JORGENSEN, Cheese & Butter Color 61	STERN, G. & G. Pumeline 61
COCKING, J. T. Poroplaic Salts and Jackets 32	JONE & CO. Methylated Spirits 55	SUTTON, F., & CO. Veterinary 54
COLMAN, J. May and Mole 55	KEARLEY & TONGE 19	SUTTON, OSCAR & CO. OS. Tooth Black 21
CORNER, R. Pine Devonshire Oils 55	KEENE & ASHWELL, Homoeopathic Medicines 65	SWISS MILK CO. Milk in Powder 21
CRESSWELL BROS. Sponges 11	KEMP, W. H. Whaupolia 60	SYMES & CO. Of Lavand. Rect. and O. Linaria Rect. 31
CRESSWELL & CO., R. (LIM.) Sponges 33	KERFOOT, T. Pearl Cachous 15	THOMPSON & CAPPER Homoeopathic Medicines 45
CROUCH, F. B. Damiana Wafers 51	KERNICK & SONS Druggists 61	THOMPSON, M. F. Corn Plasters 27
DAHL'S AGENCY Dahl's D. spezia Cakes 51	KUHN, B. Solot, Pappin Finkler, Chemicals and Pharmaceutical Products 45	TOODGOOD, W. Earthenware Covered Pots, Patent Pill Cooler 63
DAVENPORT, L. China Inc 47	LEATH & ROSS Homoeopathic Medicines 3	TOWNSEND, J. Original Salts 27
DENAYER'S PEPTONE CO. Peptones 21	LEVERMORE, A., & CO. Precipitated Chalk 61	TRAVALLO, S., & CO. Original Salts 27
DENOUIL, J. Medicinal Capsules 51	LIVERPOOL LINT CO. Lint 32	TREAT, R. C. Perfumes 51
DU BOYER, MARIE Toilet Preparations 25	LOYD, MRS. A. Eucasia 28	TYRER, P. Ketchup, Sauces, &c. 15
DUNCAN, FLOCKHART & CO. Chloroform 34	LOHMANN, DR. Ferrugine Red action by Hydrogen 59	UNITED KINGDOM TEA CO. Tea 20
DUNN & CO. Chemists 34	LOISETTE, PROFESSOR 6	VACCINE ASSOCIATION Pure Lumen 51
DURANT, G. & CO. Orange Juice 60	LONDON HOMOEOPATHIC HOSPITAL 6	WALTON, J. Rasp. Pills and Tonic Paste 58
ELLIMAN, SONS & CO. Embrocation Text 245	LYNCH & CO. L. Brand Dispensing Bottles COVER 6	WERNER & PFLEIDERER Universal Micing Machine 64
EMPLOYERS' LIABILITY ASSURANCE CORPORATION (LIM.) 6	MAC, H. Pasta Mac 27	WHIFFEN, THOMAS Caffeine, Styrachine, Salicine 39
EPPS, J., & CO. Homoeopathic Medicines 27	MACAUGHTAN, F. J. Licorice 59	WHITE, A., & SONS Wholesale Druggists 51
EVANS, SONS & CO. Coca Wine and Red Bark Bitters 52	MARTINDALE, W. Nitro-Glycerine Tablets 45	WILKINSON, A., & CO. Compressed Hops 61
EVANS, SONS & MASON, LIM. 52	MAW, SON & THOMPSON, S. Caution Notice 4, 5	WILSON, S. Flypapers 58, 65
EWEN & SONS 52	MAWSON, SWAN & WEDDELL Syringes 51	WOOLLEY, J., & CO. Manufacturing Pharmaceutical Chemists 42
EXCHANGE CO. LUMY 10	MAY & BAKER Phen. and Naliphonal Bayer Merc. Tablets, Bitters, Repent Camphor, COVER 64	WRIGHT & CO. Books 6
FARINA, J. & M. Eau de Cologne 25	MAY, ROBERTS & CO. Illustrated Catalogue 64	WVLEYS & CO. Coated Oil Pill 45
FISHER, CLARK & CO. Bottle and Parcel Ink 60	MELIN, C. Capsuling Machine 45	ZIMMERMANN, A. & M. Chemicals 37
FLETCHER, FLETCHER & STEVENSON Eucalyptus Oil Text 246	MISCELLANEOUS ADVERTISEMENTS Coloured Supplement 33	
FOUGERA, E., & CO. Fougine 15	MORRIS & COLLARD Chemicals 33	
FRENCH HYGIENIC CO. Vinacova Tobacco 53	MORTON, H. The Mother's Friend 51	

CLASSIFIED LIST OF ALL ADVERTISERS

Whose Announcements appear in "THE CHEMIST AND DRUGGIST." Those whose Names do not appear above are published in one of the other issues of this month.

AERATED AND MINERALS Adams, B. Acolinaris (Hanyard, Friedrichs, and Apollinaris) Barnett and Foster Chemists' Aerated Waters Association Durrant, Geo. & Co. Eliis (Rathin) Hay, W. Fessall and Co. (Clitro Acid Phospho) Hunsford Janos Idris and Co. Ingram and Royle Jewsbury and Brewin Johannis Mineral Water Co. (Lim.) Kinmond & Co. Mills and Co. (Bourne) Schacht, W., & Co. (Kronenquells) Taylor, P., and F. J. See GINGER ALE	ACETIC ACID Dunn and Co. Morris and Callard (Salts) Putz and Hendrichs AGENCIES ABROAD Australian Drug Co. Berkeley, Taylor & Co. Campbell, N. S., and Co. Cocking (Japan) Evans, Sons and Mason (Lim.) (Canada) Felton (Melbourne) Fougere (New York) Kempthorne (New Zealand) Macnaughton, F. J. Peake, Allen and Co. Roberts (Paris, &c.) Rocke (Melbourne) Sharland & Co. (Auckland N.Z.) Soul, W. H., and Co.	APPARATUS Brecher & Co. (Automatic distilling) Clarke, S. (Food Warmer) May, Roberts (Water-bath) Orme (Scientific) Perken, Son and Rayment (Scientific) Rithermel, Paul (Vinegar) BANDAGES Bailey, W. H., and Son Bole Hall Mill Co. Robinson and Sons Schutze, F., & Co. BATH GLOVES Maw, Son and Thompson Seabury and Johnson Solport Bros. BOXES Austin and Co. (Cardboard) Irvin and Selters Metz, Paul (Willow) Noakes, B., & Co. Self-Opening Tin Box Co.	BEEHIVE & HONEY BOTTLES Bowdler and Co. BISMUTH, PREP. Hearon, Squire and Francis Hewlett and Sons Howards and Sons May and Baker Syms and Co. White, Alfred and Sons BOTANIC BEER Newball and Mason BOOKS Baily, J. Churchill, J., and A. Hargreaves, Dr. James, Dr. Proseur Keene and Ashwell Loissette, Professor Pritchett, W. E. Robinson, G. H. Wells, G. Wright, J., and Co. BRUSHES Bailey, C. J., and Co. (Toilets) Ludia Hubber) Dukas and Co. Goodall, H. A., and Co. (Tooth) Sutton, O., and Co. (Tooth)	BARNETT AND FOSTER Barnett, R. H. Bradby and Hinchliffe Breith's (Lim.) Brooks, Peel (Perfumer) Hearn, E. A., and Co. Jesses and Co. Kilner Bros. Latz, J., and Co. Maw, Son and Thompson Pots Teo good BUTTER COLOR, &c. Bush, W., and Son (Mari-goldine) Johnson and Jorgensen Oldfield, Pattison and Co. Tomlinson and Hayward CAMPFIRE Howards and Sons Keene and Ashwell (Honey-may and Baker) (Pachic) Maw, Son and Thompson CARMINE Bush, W. J., and Co. Sellers CASC. SAGRADA Duncan, Flockhart and Co. Squire and Sons Evans, Sons and Co.
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CAPSULES

Denoual, J. (Medicinal)
Duncan, Flockhart and Co.
(Cascara Sagrada)
Durant, T., and Co.
Evans, Sons and Co.
Hooper, B., and Co.
Maw, Son and Thompson

DITTO (METALLIC)

Betts and Co.
Melin, C. (Machine)

CATALOGUE

Maw, S., Son and Thompson
(Price Current)
Newbery, F., and Sons
Sanger and Co.
Thompson, Millard and Co.

CAUTION

Hop Bitters Co.

CHEMICALS

Bennett and Jenner
Bush, W., Son and Co.
Dunn and Co.
Fletcher, Fletcher & Stevenson
Gaskell, Deacon and Co. (Bi-carbonate of Soda)
Goodall, Backhouse and Co.
Hill, A. S., and Co.
Hill, A. S., and Son
Howards and Sons (Pharm.)
Kuhn, B.
Levermore, Aug., and Co.
Lofthouse and Saltmer
Lohmann, Dr. Paul
May and Baker
Oscar Andreae and Co.
Prunk, Davis and Co.
Stern, G., and Co. (Pumiline)
Sumner, R., and Co.
Smith, T. H., and Co.
White, A., and Sons
Whiffin, T.
Zimmermann, A. and M.

CHALK PRECIP.

Dunn and Co.
Levermore, Aug., and Co.
White, A., and Sons

CHEST PROTECTRS

Maw, Son and Thompson
Wood, V.

CEL. OF POTASH

(Compressed Tablets)
Burroughs, Wellcome and Co.
Hooper, B., and Co.

CHLORIDE OF LIME

Government Sanitary Co.
National Chemical Co.
New Carbolite Sanitary Co., Ltd.

CHLOR. OF GOLD

Oscar Andreae and Co.
Rowland, L.

CHLORODYNE

Blyton-Bage and Co. (Twem-low's)
Burroughs, Wellcome and Co.
Davenport (Browne's)
Freeman, R.
Thomson, Wakeham and Co. (Dr. Henry's)
Towle, A. F.

CHLOROFORM, &c.

Duncan, Flockhart
Lofthouse and Saltmer
Macfarlan, J. F.
Smith, T. and H.
Zimmermann

CIGARETTES

Evans, Sons and Co.
French Hygienic Co. (Coca)

CITRIC ACID

Hasalls (Phospho)
Nascio, Aveline and Co.

COCAINE HYDRO.

Houde, A.
Howards and Sons

COCA WINE

Armbricht, Nelson and Co.
Evans, Sons and Co.
French Hygienic Co. (Cigarettes and Tobacco)

COCOA & CHOCOLTE

Cadbury
Fry (Malted)
Van Houten's Cocoa

COD-LIVER OIL

Allen and Hanbury's
Brekke and Howld
Burroughs, Wellcome
Evans, Sons and Co.
Hill, A. S., and Son
Lorimer and Co.
Smith, T. J.
Wentley, Sons and Co.
Wright, Layman and Umney

COFFEE

Hymington Co. (Coffee Ess.)

COLLapsible TUBES

Betts and Co.
Brooks, H., Peel and Co.

COMPRESSD MEDCNS

Allen and Hanbury's
Burroughs, Wellcome and Co.
Hooper, B., and Co.

CONFECTIONERY

Bage, Blyton and Co.
Gibson, R., and Sons
Kerfoot, T.
Warrick Brothers

CONCENTD. LIQS.

Evans, Sons and Co.
Fletcher, Fletcher & Stevenson
Keith, B., and Co.

CORKS

Bishop and Warden (Socks)

CORN CURES

Maw, Son and Thompson
Robinson, J.
Solpott Bros.
Thompson, M. F.

COTTON WOOL

Haynes G., & Co. (Absorbent)
Maw, Son and Thompson
Robinson and Sons (Absorbent)
Sanger, J., and Sons
Seabury and Johnson

DENTIFRICES

Du Boyer, Marie
Jewsbury and Brown
Newbery and Sons
Sutton, O., and Co.
Thompson and Capper
Woods, W. (Arecia Nut)

DISINFECTANTS

Government Sanitary Co.
Hamilton and Co.
Hornby, A.
Hygienic Paper Co.
Jeyes
National Chemical Co.
New Carbolite Sanitary Co., Ltd.
Sanitas Co.

DISINTEGRATORS

Carter, J. H.
Hardy Patent Pick Co., Lim.

DOG MEDICINES

Spratts (Patent)

DRUGGISTS' SUN.

Ayrton and Saunders
Bishop & Warden (Cork Socks)
Evans, Lescher and Weno
(Hawley's Counter Adjuncts)
Evans, Sons, and Co. (Savars)
Hill, A. S., and Son
Irlis and Co.
Lynch and Co.
May, Roberts and Co.
Newbery, F., and Sons
Sanger and Sons
Schutze and Co.
Thompson, Millard and Co.
Toogood, W.
Wood, Vincent

DRUMS, CANS, &c.

Noakes and Co.

EAU DE COLOGNE

Farina, J. M.

EFFERVESCENT

Allen and Hanbury's (Saline)
Bishop, A., and Sons
Fritz and Co.

ELECTRIC APPAR.

Colthurst & Harding (Electric Light Oil)
Darton, F., and Co.
Orme and Co.

EMBROCATION

Burgett, Joshua
Clark, W.
Elliman, Sons and Co.

ENEMAS

Ingram and Son
Maw, Son and Thompson
Sanger and Son
Schutze, F., and Co.

ENGRAVERS

Barker, W., and Son

ESSENCES, FRUIT AND SOLUBLE

Brady and Hinchliffe
Burgoyne, Burdidges and Co.
Bush, W. J., and Co.
Bush, W. J., Son and Co.
Cummock, J.
Goodall, Backhouse and Co.
Hay, W.
Idris and Co.
Lorimer and Co.
May and Baker
Oldfield, Pattison and Co.
Stevenson and Howell
Tyrer, P. (Anchovies)
Veget, G.
Woolley, Sons and Co.

ESSENTIAL OILS

Bush, W., Son and Co.
Bush, W. J. (Lemna, &c.)
Cocking (Japan Peppermint)
Cummock, J.
Evans, Sons and Co.
May and Baker
Nascio, Aveline and Co.
Rocke, Tumpsett (Eucalyptus)
Stallman and Fulton
Stevenson and Howell
Symes and Co.
Vogt, G.
Warrick Brothers
Wright, Layman and Umney

ETHER

Duncan, Flockhart and Co. (Chloric)
Howards and Son
May and Baker
Robbins

EUCALINUM

Rocke, Tumpsett and Co. (Antiseptic Poultice and Vinegar)

EUCALYPTUS OIL

Downie, B. L. P. Co.
Fletcher, Fletcher & Stevenson

EXTRACT, MEAT

Brand and Co.
Johnston's Fluid Beef
Liebig Co.
Viking Food and Essence Co.

EXTRACTS, FLUID

Allen and Hanbury's
Barber, G., and Co.
Burgoyne, Burdidges
Evans, Sons & Co.
Fletcher, Fletcher & Stevenson
Hearon, Squire and Francis
Oldfield, Fattison and Co.

FEEDING BOTTLS.

Hearn, E. A., and Co.
Kilner Bros.
Maw, Son and Thompson
May Roberts and Co.
Pocock, Kevill and Co.
Thompson, Millard
Toogood, W.

FLY PAPERS

Ford, Shapland and Co.

FILTERING

Doulton and Co.
Mawson Swan, and Weddell
Slack & Brownlow
Sliced and Filter Co.

FOAM PRODUCERS

Bush, W. J. and Co.

FOOD WARMERS

Clarke, S.

FOOD (Infants & Invalids)

Allen and Hanbury's
Benger's Pancreatic
Brand and Co.
Dahl's Dispersa Cakes
Goodall, Backhouse and Co.
Hearon, Squire (Malted)
Johnston's Fluid Beef
Lazear, E., and Son
Liebig Co.
Maclean and Son
Mottershead and Co. (Benger's Food)
Nestle, H.
Ridge's, Dr., Food
Van Abbott (Diabetic)

FORMULE

Brooks, T.

GINGER ALE

Adams, B.
Kinnmond and Co.
Hay, W. (Essence)
Mills, R. M.

GLYCERINE

Fink
Martindale, W. (Nitro-Glycerine Tablets)
Maw, Son and Thompson
Price's Canlie Co.

GRANULAR PREP.

Bishop, A., and Sons
Burroughs, Wellcome and Co.
Bush, W., and Co.
Evans, Sons and Co.
Hearon, Squire and Francis
Hill, A. S., and Son
Kerfoot, T.
Wright, Layman and Umney

GUMS

Fink (Arabic, &c.)

GUTTAPERCHA

Duncan, Flockhart

HAIR PREP.

Bates, F. W. (Frizzetta)
Brodie, J. (Imperial Hair Dye)
Chesebrough Mfg. Co.
French Hygienic Co.

HERB BEER EXTS.

Adams, B.
Newball and Mason
Oldfield, Pattinson and Co.
Potter and Clarke

HERBALISTS

Adams, B.
Newball & Mason (Ext. of Herbs)
Potter and Clarke
Wilkinson, A., and Sons (Compressed Hops)

HOMOEOPATHIC

Epps and Co.
Keene and Ashwell
Leath and Rose
Thomson and Capper
Watts, J. J., and Co.

HOPS

Wilkinson, A., and Sons (Compressed)

HOP ALE ESSENCE

Hay, W.

HOSPITALS

London Homoeopathic

HYPHOSPHITES

Duncan, Flockhart and Co.
Dunn and Co.
Fellows
Fletcher, Fletcher & Stevenson
Symes, H. H. (Dr. Churchill's)
Yeastman, F. J.

INK (See MARKING.)

Bewley and Draper
Duncan, Flockhart

INHALERS

Godfrey and Cooke
Maw, Son and Thompson
Toogood, W.

INSECTICIDES

Cole, W.
Greiff, R. W., and Co.
Sanford
Seiner and Co.
Vogt, G.

KETCHUP

Tyrer, P.

LARD

Ewen, J.

LAMPS, LIGHTS, &c.

Clarke, Samuel ("Fairy")

LEECHES

Fitch and Nottingham
Potter and Clarke

LIME JUICE

Idris and Co.

LINSEED

Idris and Co.
Mumford, G. S.

LINT

Liverpool Lint Co.
Maw, Son and Thompson
Robinson and Sons
Seabury and Johnson

LOZENGES

Allen and Hanbury's
Blyton, Bage & Co. (Medicated)
Evans, Sons and Co.
Gioson, E., and Sons (Mentha)
Hill and Son
Hoad, A. (Hydrochlorate of Cocaine)
Kerfoot, T.
Lorimer and Co.
Martindale, W. (Nitro-Glycerine Tablets)
Warrick Brothers (Heliotrope Pastilles)

LOOFAHS

Maw, Son and Thompson
May, Roberts and Co.
Sanger and Sons

MACHINERY

Carter, J. H.
Hardy Patent Pick Co., Lim.
Melin, C. (Capauline)
Werner and Pfeiderer

MAGNESIA

Banner, E. R. (Citrate)
Bishop, A., and Sons
Bush, Son and Co.
Dinnford
Henry, T. and W. (Calcined)
Hill and Sons, A. S.
Kerfoot, T. (Citrate)
Lorimer and Co. (Citrate)
Oscar Andreae and Co.

MALT EXT., ETC

Hearon, Squire and Francis
Paterson's Chemical Manufacturing Co.

MENTHOL

A. I. Menthol Depot, A. W.
Shirley, Frontletor
Castle Menthol Co.
Cocking and Co.
Hockin Wilson and Co.
Maw, Son and Thompson
Shirley, A. W.

MARKING INKS

Barber, G., and Co. (Crimson)
Christian, J.
Hickinson, J.

MEASURES

Hicks, J. J.

MEDICINE CHSTS

Day, Son and Hewitt (Veterin.)
Day and Sons

MERCURIALS

Bush, W., and Co.
Howards and Sons
May and Baker

METHYLATED**SPIRITS**

Burroughs, J.
Harvey, J. & W., and Co.
Jones and Co.
Phillips, G., and Co.

METHYLENE

Robbins, J., and Co.

MICROSCOPES

Darton, F., and Co.
Perken, Son and Rayment

MILE

Nestle, H. (Condensed)
Swiss Milk Co.

MIXING MCHRY

Bracher and Co.
Carter, J. H.
Werner and Pfeiderer

MORPHIA

Macfarlan, J. F., and Co.
Smith, T. and H.

MUSTARD

Banner, E. R. (Oil)
Johnson, J. H. and S. (Ess. Oil)

NEPENTHE

Ferris and Co.

NIGHT LIGHTS, &c.

Clarke, S.

OILS, PAINTS, &c.

Colthurst and Harding
Gregory, W. (Devonshire Oils)
Prunk, Davis and Co.
River Head Oil Mills Co.
Vogeler, The Charles A., Co. (St. Jacob's Oil)

OINTMENT BASES

Chesebrough (Vaseline)
Grindley (Petroleum Jelly)

OPTICIANS

Darton, F., and Co.
Perken, Son and Rayment
Raphael, J., and Co.

PAPAIN FINKLER

Kuhn, B.

PARALDEHYDE

Zimmermann, A. and M.

PATENT AGENTS

Horn and Son

PATENT MEDCNS

Armbricht, Nelson & Co. (Coca Wine)
Atkinson (Infant Preserv)
Burrett, Joshua
Becham (Pills)
Beedler, J., and Co.
Crouch, F. B. (Wafers)
Dahl's Dispersa Cakes
Edwards and Son
Evans, Lescher (Hawley's Counter Adjuncts, Coated Pills, &c.)
Fennings' (Powders)
Galloway (Pills and Oint.)
Hop Bitters Co., Lim.
Kemp, W. H. (Whoopoline)
Lalor (Phosphodyne, &c.)
Lincoln (Clarke's Mix.)
Lynch and Co.
May, Roberts and Co.
Morton, H.
Munday, J. (Injection Day)
Newbery and Sons
North Medicine Co.
Ratti and Co. (Euphorosine)
Roberts (Foreign)
Singleton's Eye Ointment
Thompson, Millard and Co.
Vogeler, The Charles A. Co.

PERFUMERY,**FANCY SOAPS.**

Atkinson, J. and E.
Bingleston, E. R.
Burroughs, Wellcome and Co.
Chesebrough Manufacturing Co.
Crown Perfumery Co.
Du Boyer, Marie
Durand, Geo.
Ewen (Soaps)
Hall's Wood Violet
Greensill, T. S., and Son (Mons Bouquet)
Maw, Son and Thompson
Moody, S. W.
Mount Carmel Soap Co.
Newbery and Sons
North Medicine Co.
Pearl's Soap (Dirty Boy)
Royal Perfumery Co.
Sainsbury, S. (Lav. Water)
Stern, G. and Co. (Pumiline)
Travado, S., and Co.
Trent, R. C.
Warrick Brothers
West, T. (Ocell's Mons)
Woolley, Sons and Co. (Powder)

PEPSINE, &c.

Burroughs, Wellcome and Co.
Fletcher, Fletcher & Stevenson
Greiff, R. W., and Co.
Newbery (Inglavin)
Warner and Co. (Inglavin)
Zimmermann

PEPTONES

Denaezer's Peptone Co., Lim.

PEROX. OF HYDR.

Dunn and Co.
Robbins and Co.

PHARM. PREPS.

Allen and Hanbury's
Barron, Squire and Co.
Benger's
Burgoyne, Burdidges
Burroughs, Wellcome (Various)
Duncan, Flockhart
Ferris and Co.
Fletcher (Lggs. for Syrups)
Greiff, R. W., and Co.
Hearon, Squire and Francis.
Hewlett and Son
Hill, A. S., and Son
Hooper, B., and Co.
Howards and Sons
Keith (Conc. Tinctures)
Kuhn, B.
May & Baker (Phenacetin)
Martindale (Nitroglycerin)
Sellers, J.
Sonthall Bros
Tyke & King
White, Alfred and Sons
Woolley, Sons
Wyleys (Various)

PHOTOGRAPHIC

Botwright and Grey
Howards and Son (Chemicals)
Perken, Son and Rayment
Marinn and Co.
May and Baker
Oscar Andreae and Co.
White, Alfred and Sons.

PLASTERS

Mather, W.
Maw, Son and Thompson
Quilliam, J., & Co.
St. Dalmas, A. Le
Seabury and Johnson
Smith, W. F.
Thompson, M. F.
PILLS (Coated, &c.)
Allen and Hanburys
Beecham, Thomas
Evans, Sons and Co.
Hearon, Squire and Francis
Hill, A. S., and Sons
Hooper, Dr.
Lorimer and Co.
McKesson and Robbins Ovoid-
capsuled
Newbery and Sons
Sanger, J. and Sons
Smith, W. F.
Southall, Bros. and Barclay
Swann, H. H.
Warner, W. R. (Coated)
Wyleys and Co.

PILL MACHINES

Maw, Son and Thompson
Pindar, J. W.
Robertson, J., and Co. (Coating)
Toogood, W. (Coater)

PINE PRODUCTS

Burroughs, Wellcome and Co.
Mack, Joseph
Stern, G. and G.

PODOPHYLLIN, &c

Keith, B. and Co.
Smith, T. and H.

PORCELAIN GDS.

Potho, H., and Co.
Toogood (E.c. Pots, regist.)

POLISHING

Baumgartner (La Brillantini)
Bradley, Bourdies (Albatur)
Clark, W.
Oakley, John, and Sons

PRINTING

Bell and Stone
Bowers Bros.
Facsimile Apparatus Co.
Ford, Shapland and Co.
Silverlock, H.
Townsend, J. (Exeter)

PUMICE STONE

Goldschneider, E. (Artificial)

PUMILINE

Clark, W.
Stern, G. and G.

QUININE SALTS

Heilgers, F. W., & Co.
Howards and Sons
Kuhn, B.
Oscar Andrae and Co.
Whiffin, T.
Zimmermann

RENNET

Benger's (Essence of)
Duncan, Flockhart and Co.
Johnsen and Jorgensen
Oldfield, Pattinson and Co.

SACCHARIN

Allen and Hanburys
Burroughs, Wellcome and Co.

SALICINE

Macfarlan and Co.
Smith, T. and H., and Co.

SALOL

Burroughs, Wellcome and Co.
Kuhn, B.
Whiffin, T.

SAUCES, PICKLES

Goodall, Backhouse and Co.
Lazenby (Harvey's)
Tyrer, P.

SCHOOLS OF PHARMACY, HOSPITALS, &c.

Central School of Chemistry
and Pharmacy
Edinburgh Classes
Liverpool School
London Homoeopathic and
Medical School
London Hospital and Medical
College
Manchester College
South London School of
Pharmacy, Lim.
The School of Pharmacy
Tully, J.
Westminster College

SEALING WAX

Fisher, Clark and Co.
Waterston, G., and Sons

SELTZOGENES

Idris and Co.
May, Roberts and Co.

SHEEP DIP

Cooper, W., and Nephews
Grindley and Co.
Tomlinson and Hayward

SHOP FITTERS

Bowling and Govier
Bygrave, J. and W.
Corsan, J. H.
Howlett, S.
Natali, E. (Show Cases)
Yates, W. B.

SOAP

Maw, S., Son and Thompson
Pears' Soap
Stern, G. and G. (Pumiline
Toilet and Sanitary)

SPECTACLES

Botwright and Grey
Darton, F., and Co.
Raphael and Co.

SPIRIT

Boord and Son
Burroughs (Pure & Methyl.)
Harvey, J. W., and Co.
Jones and Mason (Methyl.)
Macnair, J. & D.
Phillips and Co.
Smith, Stephen and Co.

SPONGE

Cresswell Bros.
Cresswell, R., and Co. (Lim.)
Maw, Son & Thompson (Bags)
Peterson, M., and Co.

STAMPS (RUBBER)

Hickisson
Pollard, A. W.
Richard, E. M.
Van Houten and Co.

STOPPERS

Austin and Co. (Sprinklers)
Barnett & Foster (The Eclipse)
Brooke, Peel (Sprinklers)

SURGICAL

Ayrton and Saunders
Bailey, W. H., and Son
Eichmann Bros. and Walsh
Haywood, J. H.
Ingram and Son
Liverpool Patent Lint Co.
Maw, Son and Thompson
Robinson and Sons
Schutze, F., and Co.
Thompson, Millard and Co.
Woolley, Sons and Co.
Wood, Vincent

STRACH

Critchley (Gloss)

SUGAR

Gibson, R., and Sons

SULFONAL

Burroughs, Wellcome and Co.
Green, R. W., and Co.
May and Baker

SYRONS

Barnett and Foster
Idris and Co.
Kilner Bros.

SYRINGES

Maw, Son & Thompson, S.
Schutze, F., and Co.
Sumner, R. and Co.

SYRUPS

Churchill, Dr.
Fletcher, Fletcher (Liquors)
Idris and Co.
Swann, H. H.

TEA

Cave, Johnson and Co.
Gt. Tower St. Tea Co.
Heseltine, Wm., and Son
Hobbs Intuser Co.
Kearley and Tonge
Pearse and Wheatley
United Kingdom Tea Co.
Walker and Dalrymple

THERMOMETERS

Darton, F., and Co.
Hague, J. J. (Clinical)
Maw, Son and Thompson
Perken, Son and Raymond
Raphael and Co.

TIN CANISTERS

Noakes, B., and Co.

TOILET

Downing, J. S. (paper)
Du Boyer
Hygienic Paper Co. (paper)
Mack, H.
Travado, S. and Co.

TOOTH PASTE

Jewsbury and Brown
Maw, Son and Thompson
Sutton, O., and Co. (Block)
Woods, M. (Arecas)

TRADE MARKS

Horn and Son

TRUSSES

Bailey, W. H., and Son
Haywood, J. H.
Lynch and Co.
Maw, Son and Thompson

TYPE-WRITING

Facsimile Apparatus Co.
Hickisson (Rubber)
Pollard, A. W.
The Universal "Simplex"
Type-Writer

URETHANE

Howards, Sons and Co.

VACCINATION

Sumner, R., and Co. (Shield)
Vaccine Association (Lymph)

VALUERS AND

TRANSFER. AGENTS

Baker, P. C.
Urtridge and Co.
Tomlinson and Sons

VARNISH

Clark, W.
Colthurst and Harding

VASELINE

Cheshrough Manufacturing Co.

VERMIN KILLERS

Battle, J. R.
Sanford and Son
Steiner and Co.

VETERINARY

Clark, W.
Corner, R. (Devonshire
Day and Sons
Day, Son and Hewitt
Elliman, Sons and Co.
Gregory, W. (Devonshire Oils)
James, W. H. (Bilster)
Spratts (Dogs)
Vogeler, The Charles A.
Tomlinson and Hayward
Walton, J.

VINEGAR

Rothermel (Making)

WHOLESALE & RETAIL DRUGGISTS

Allen and Hanburys
Barron, Squire and Co.
Burgoyne, Enbaldies
Bush, W., Son and Co.
Evans, Leecher and Webb
Evans, Sons and Co.
Evans, Sons and Mason (Lim
Ferris and Co.
Goodall, Backhouse and Co.
Harker, Stag and Morgan
Hearon, Squire and Francis
Hewlett and So
Lorimer and Co.
Lothouse and Saltmer
Hill, A. S., and Son
Oldfield, Pattinson and Co.
Potter & Clarke (American, &c
Southall Bros. and Barclay
Sumner, R., and Co.
Synes and Co.
Thompson, Millard and Co.
Willows, Francis, and Butler
Woolley, J., Sons and Co.
Wright, Layman and Umrev
Wyleys and Co.

WINDOW TABLES

Corsan, J. R. (Engraved)

WINES AND SPIRITS

Boord and Son
Coleman and Co.
Durrant, G. (Orange)
Goodall, Backhouse and Co.
Idris & Co. ((Quinine Wine)
Ingram and Royle
Phillips, G., and Co. (Pure
Spirits of Wine)
Smith, Stephen, & Co. (S.V.R.)
Robinson, B. (Orange)

WOOD WOOL

Sanitary Wood Wool Co.

NEWBERY'S OVAL PEDESTAL PILL VASES

REGISTERED PATTERNS.

PRICES MATERIALLY REDUCED.

SEE NEWBERY'S

1888 CATALOGUE.



Label Design Registered under Trade Marks Act.

Vases supplied with Pills only.

EAU DE COLOGNE

OF THE MOST ANCIENT DISTILLER,

JOHANN MARIA FARINA,

Opposite the Jülichs Place, COLOGNE.

ESTABLISHED A.D. 1709.

PRIZE MEDALS:—LONDON, 1851 AND 1862; OPORTO, 1865; PARIS, 1867; VIENNA, 1873.

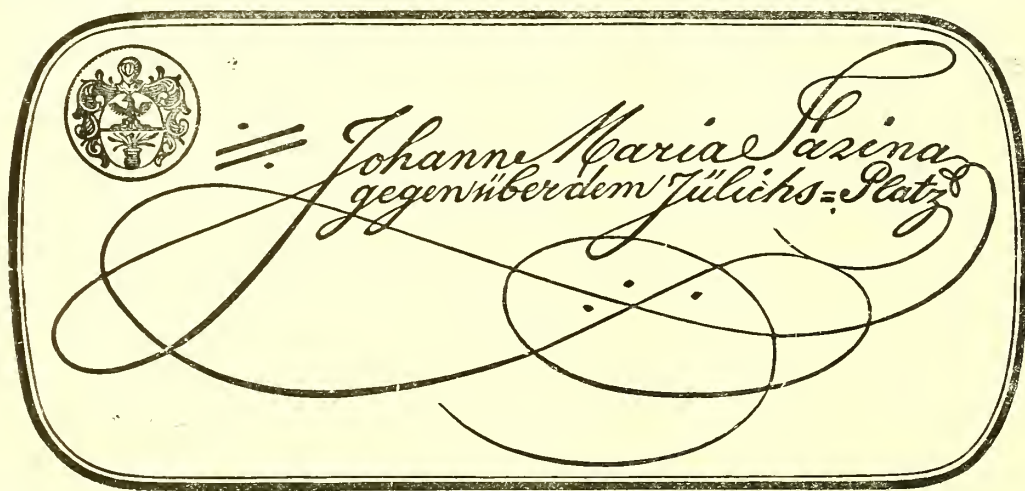
By appointment, Sole Purveyor to Her Most Gracious
Majesty Victoria, Queen of Great Britain & Ireland;
Their Royal Highnesses the Prince and Princess
of Wales; William, King of Prussia;



Albert II., King of Saxony; Alexander II., Emperor
of Russia; Francis Joseph, Emperor of Austria;
Lewis, King of Portugal; H.R.H. Frederick
William, Crown Prince of Prussia.

In consequence of increasing inquiries from the Colonies for my Eau de Cologne, the only genuine, I
beg to submit my Price Current.

At the same time I beg to call special attention to the following facsimile of my Trade Mark, for the
protection of which I have instituted thirteen suits in the High Court of Chancery, all of which have been
decided in my favour.



All similar Labels being more or less imitations of the same, I shall proceed as before against all persons
selling or exposing for sale any such imitations.

I only prepare one quality of Eau de Cologne. This quality never varies in the slightest degree, and there
has not been the smallest change in the manufacture since the year 1709, when it was invented by my ancestor.

Orders equal to at least 12 dozen short bottles will be promptly executed at 13s. 6d. per dozen, against my
bill drawn at three months from the date of invoice, delivered free on board the export ship, at Rotterdam,
Antwerp, Hamburg, or Bremen, no charge being made for the case and packing, but insurance charged extra.
7½ per cent. discount is allowed for orders equal to at least 100 dozen, but on no smaller quantities.

I may add that, as I do not draw on the Colonies, all Orders must be accompanied by a credit on some
London House, or permission to draw on same at three months.

The Goods can also be shipped in transit through London at a very small additional expense, full particulars
of which may be obtained of my Sole Agents for Great Britain and Ireland:—

MESSRS. J. & R. McCracken,
No. 38 Queen Street, Cannon Street, London, E.C.

The following are the sizes of my bottles:—

No. 1. Long Green Flasks	—	—	—	—	—	—	12 bottles	} to one dozen.
" 2. Short White Bottles	—	—	—	—	—	—	12 "	
" 3. Double ditto	—	—	—	—	—	—	6 "	
" 4. Wickered Bottles (small)	—	—	—	—	—	—	8 "	
" 5. ditto (medium)	—	—	—	—	—	—	4 "	
" 6. ditto (large)	—	—	—	—	—	—	2 "	

JOHANN MARIA FARINA.
OPPOSITE THE JÜLICHS PLACE.

COLOGNE: January, 1888.

HOMŒOPATHIC MEDICINES

REDUCED PRICES, SUBJECT TO CASH DISCOUNT.

	1s. size.	6d. size.
Pilules	5/-	3/- per dozen.
Tinctures	5/-	3/- "
Camphor Solution or Pilules ...	5/-	3/- "
Arnica External Tr.	7/-	4/- "
Tamus	6/-	4/- "
External Trs. (except above) ...	5/-	3/- "
Liniments	8/-	4/- "

SELECTIONS IN COUNTER SHOW CASES AT £2 12s., £3,
£5 10s., £6 18s.

JAMES EPPS & CO.,
HOMŒOPATHIC CHEMISTS
(FIRST ESTABLISHED),
48, THREADNEEDLE ST., LONDON.

IN WRITING MENTION THIS PAPER.

**COMFORT
FOR THE FEET.**

Corns, hard or soft, and Bunions may be removed, and Enlarged Toe Joints may be reduced, by the use of the NEW FRENCH CORN PLASTER. The sole importer and proprietor is M. F. THOMPSON, HOMŒOPATHIC CHEMIST, 17 GORDON STREET, GLASGOW, from whom the Plaster may be had in Packets, by post, for Fourteen Stamps. Those who are troubled with the discomfort of Corns or Bunions will be glad to have attention called to this remedy, as it removes pain very speedily. It is a simple Plaster, which can be used without any inconvenience, as it takes up imperceptible room in the boot.

Wholesale, 9/- dozen, 4/9 half dozen, 2/6 quarter dozen.

All Post Free for cash with Order.

BEWARE OF ALL IMITATIONS.

ORIENTAL AROMATIC SALTS,
FOR BATH AND TOILET PURPOSES.

The ORIENTAL AROMATIC SALTS, when dissolved, render the water very soft, and impart a most agreeable and refreshing perfume that can be diffused with advantage in a room where the air is close and depressing.

The ORIENTAL AROMATIC SALTS strengthen the tissues, perfume and invigorate the body, preserving it from contagious diseases, and cleanse the pores, thus facilitating the cutaneous transpiration so necessary to life.

The ORIENTAL AROMATIC SALTS are unrivalled for beautifying and preserving the skin, rendering it soft and velvet-like; and for keeping the complexion perfectly bright and clear. They are indispensable in the Bath, as well as in the Bed-room, and should be used by everybody.

DIRECTIONS.

These AROMATIC SALTS, dissolved in an ordinary Bath, hot or cold, will soften the water, and give out a most refreshing perfume.

For ordinary bathing, one packet of Salts (if in boxes; and one-fourth, if in bottles) will be sufficient for each Bath; but a larger quantity may be used if desired.

For washing the Hands or Head use two teaspoonfuls of Salts in about half a gallon of water. For the Face, a small quantity of Salts only is required, say about half a teaspoonful.

Sold in Bottles at 1/6. To be had of all Perfumers, Chemists, and Stores. Wholesale of the Patentees and Manufacturers—

S. TRAVADO & CO., 27 Jewry St., E.C., LONDON.To be had also of Messrs. BREIDENBACH & CO., Perfumers to the Queen,
157b NEW BOND STREET, W.**GREENSILL'S** THE ORIGINAL

When ordering **MONA** AND ONLY
from **BOUQUET** GENUINE.

Wholesale Houses
please specify **BOUQUET**
"GREENSILL'S."

SOLE MANUFACTURERS—

T. S. GREENSILL & SON

LOCH PARADE,

DOUGLAS, ISLE OF MAN.

This entirely new and excellent health-giving preparation *SOFTENS* the WATER, and gives it a most

DELICIOUS ODOUR.

PASTA MACK

BEAUTIFIES THE COMPLEXION

In a most extraordinary way.

Should be in every Bathroom and Bedroom.

To be had of all respectable Chemists and Perfumers throughout the world.

Sole Manufacturer and Inventor, **H. MACK, Ulm a/D.**

Wholesale Agents for Great Britain—

OSBORNE, GARRETT & CO., LONDON, W.

FREE SAMPLES GIVEN AWAY WITH EVERY TRIAL ORDER.

A. S. LLOYD'S EUXESIS,

For Shaving without Soap, Brush, or Water.

CAUTION.

The only Genuine has a yellow label printed ONLY in Black Ink, and bears the original address of the late inventor, "27 Glasshouse Street, Regent Street," the proprietors having purchased, under an administration suit, the Secret, Trade Mark, Goodwill, and Premises:

SOLE PROPRIETORS

R. HOVENDEN & SONS, LONDON.

CAUTION.

A. S. LLOYD'S EUXESIS,

FOR SHAVING WITHOUT SOAP, WATER, OR BRUSH.

The GENUINE Euxesis bears the following distinctive marks:—

1.—My full name AIMEE LLOYD on cap of tube.

2.—The words "Prepared only by his Widow" and my signature of AIMEE LLOYD in RED INK across labels, in addition to my late Husband's signature in black ink.

AIMEE LLOYD

(WIDOW OF A. S. LLOYD, formerly of 27 GLASSHOUSE STREET.)

3 SPUR STREET, LEICESTER SQUARE, LONDON.

MARIE DU BOYER'S

DIANE DE POITIERS SPECIALITIES

REGISTERED



TRADE MARK.

FOR TOILET & COMPLEXION

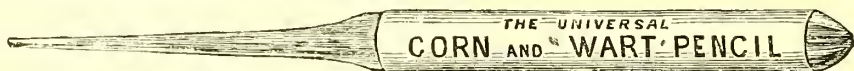
Are giving great and general satisfaction, and, being most attractive in get up, sell at sight.

TWENTY-FIVE PER CENT. TO THE TRADE.

A liberal supply of Counter Wrappers and Pamphlets on application.

MARIE DU BOYER, 41 New Bond Street, LONDON.

CORNS.



WARTS.

ROBINSON'S.

THE OLDEST AND MOST SUCCESSFUL.

1 doz. mounted on a handsome Illustrated Show Card, Retail, 6d. each; Wholesale, 3s. 6d. per doz. It is especially adapted for Export Trade, and may be safely sent to the hottest climates, as each glass tube is hermetically sealed and enclosed in a cardboard case, with full directions for use.

N.B.—The above is exempt from Stamp Duty by permission of the Board of Inland Revenue.

Wholesale by all the Patent Medicine Houses, or from

B. ROBINSON, Manufacturing Chemist and Distiller, PENDLETON, MANCHESTER.

OSCAR SUTTON & CO., Preston, Lancashire, England.

O.S. TOOTH BLOCK.

REGISTERED  TRADE MARK.

Be particular to observe that the Registered Trade Mark and the name 'OSCAR SUTTON & CO.' are stamped on all that are genuine, as worthless imitations are in the market.

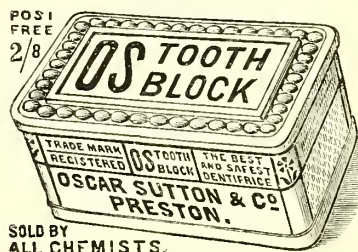
BEST & SAFEST DENTIFRICE

SOLD BY ALL CHEMISTS
AND PERFUMERS, IN
ELEGANT CRYSTAL
TOILET CASKET
PRICE 2/6.

ALSO IN PATENT
METALLIC BOX
PRICE 1/6.



Prepared from materials recommended by several of the most eminent Dentists of the day, at a Meeting of the Odontological Society, held in London, February 1875, when the important subject of Dentifrices was discussed.



POST
FREE
2/8

SOLD BY
ALL CHEMISTS.

THE BEST AND SAFEST DENTIFRICE.
TWO THOUSAND TESTIMONIALS.

JOHN R. HALL'S WOOD VIOLET.

PATRONISED BY

H.R.H. The Princess of Wales.
H.R.H. Princess Christian.

H.I. and R.II. the Crown Princess of Germany.
H.R.H. the Princess Louise (Marchioness of Lorne).
H.R.H. Princess Henry of Battenberg.
H.R.H. the Duchess of Teck, &c.

EDWIN R. BIGGLESTON'S HELIOTROPE ESSENCE

The Queen, the Ladies' Newspaper, remarks:
"Edwin R. Biggleston's HELIOTROPE ESSENCE is delicate and durable; can be well recommended."

In Bottles, 1/6, 2/6, 5/6, 7/6, 10/6, and 21/.

EDWIN R. BIGGLESTON,
CANTERBURY.



BARNETT'S

(HERBERT H. BARNETT, late of New Zealand)

PERFUMES.

THE GENUINE

'OPOPONAX'

FRANGIPANI
WHITE ROSE
JOCKEY CLUB

STEPHANOTIS
WOOD VIOLET
RONDELETIA

And many others, in ¼, ½, and 1 lb. Bottles.

Considering Quality and Strength, these are the Cheapest and most saleable in the Market.

SWEET SCENTED SACHETS.

HAIR & TOILET PREPARATIONS of every description.

Samples 8/6 per gross. Samples & Price Lists Post Free

BARNETT & CO.

Laboratory of Flowers, 31 BROAD STREET,
Warehouse and Manufactory, 285 BROAD STREET,
BIRMINGHAM.

London Offices—129 Aldersgate St. & 1 Carthusian Street. J. W. KIRBY, Agent.

SHIPKOFF & CO. OTTO OF ROSE

MANUFACTURERS & MERCHANTS,
KIZANLIK, BULGARIA.

VIRGIN OTTO ONLY DEALT IN.

REPRESENTED IN ENGLAND BY

GEO. P. BAKER, 19 Ivy Lane, Newgate St., London, E.C.

H. BROOKS, PEEL & CO. [ESTAB. 1810.] COLLAPSIBLE TUBE MANUFACTURERS,

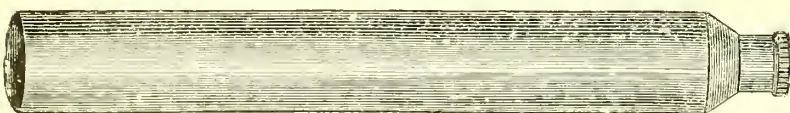
Patentees and Sole Manufacturers of the PORTABLE METAL SPRINKLER STOPPER, and Dealers in GLASS BOTTLES FOR PERFUMERS AND OTHERS.

Steam Factories: 31 Lyme Street, Camden Road (Offices), and Bartholomew Road, Kentish Town, London, N.W.

COLLAPSIBLE TUBES

OF ALL SIZES.

For Perfumes, Artists' Colours, Soaps, Cosmetics, Creams, Oils, Varnishes, &c. These Tubes are inexpensive and portable, and may be applied to many useful purposes besides those above mentioned.



SOLE MANUFACTURERS AND PATENTEES OF

THE PORTABLE METAL SPRINKLER STOPPER,

With Cork fitted thereon for bottles of any size, and having apertures of various dimensions, especially adapted for Perfumes, Hair Washes, Lime and Glycerine Essences, &c. These handsome stoppers give a character and finish to the most ordinary bottles to which they may be applied. Gilt or plain; and put up if required in handsome glass lid boxes, suitable for shop counters and show cases, at moderate prices.

THE "TORSION" PATENT SPRINKLER

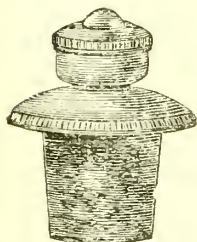
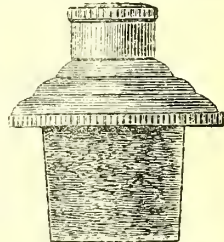
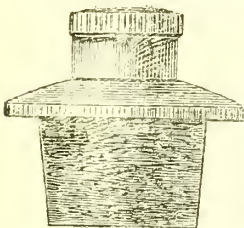
The two designs, Nos. 18A and 19A, are those to which we direct special attention, as sizes being in general use other sizes will follow promptly to meet all requirements, on which Caps with two or more holes will be introduced to meet the public taste.

Particular attention is called to the latest improvement in our Patent Metallic Stopper, the "Torsion." This New Stopper adheres to the design of the original patent, which has been universally acknowledged as an ornamental and inexpensive article for the Toilette, as possessing all the advantages of a "Permanent and Indestructible Stopper, suitable for Bottles of all Sizes and Shapes," with the additional security it affords, that the Cap can never be entirely unscrewed, consequently it cannot be lost. It is especially effective as a Sprinkler, while giving a more prompt and copious, yet economic, supply, through the improved action of the Cap. Such combined advantages, in an article of exquisite finish, have long been desired, and it is thus submitted for general approval, and its usefulness when tried will be appreciated by all.

Illustrations, Price Lists, &c., can be had on application, or through any Wholesale House in town or country. All orders received direct will be promptly attended to.

CAUTION.—All Stoppers of our Manufacture are made of Pure Tin, and have the name of H. BROOKS & CO. stamped on the under side of the rim.

All Tubes are made of Pure Tin unless specially ordered of Mixed Metal, from the smallest size up to 13 in. by 2½.



No. 1



No. 19A

EVERY CHEMIST should keep in Stock

"LA BRILLANTINE" METALLIC POWDER (REGISTERED),

Being the best and most effective Polishing Powder for Metals, especially Brass. It is used by the Life, Horse, and Dragoon Guards, the Metropolitan Fire Brigade, &c. Sold in 1d. packets, 6d. and 1s. boxes. Send Postal Order for 6s. Sample Order to the Proprietors,

J. F. BAUMGARTNER & CO.

15, CD. (22) NEWMAN STREET, OXFORD STREET, LONDON, W.

Or any Wholesale House.

Beware of Imitations.

TETLOW'S

AMERICAN FACE POWDERS.

6d. "SWANDOWN." 6d. 1/- "GOSSAMER." 1/-
3/6 per doz. 7/- per doz.

A Sample Bottle of perfume given with each box of Swandown.

A Metal Puff Box given with each box of Gossamer.

Chemists will find these articles most attractive for the Counter; they sell readily wherever shown. Quality is proved by constant and increasing sale. Supply of free samples with each order of 1 doz.

Order through your Wholesale House, or direct from London Depot—

HENRY C. QUELCH, 19 Ludgate Hill, LONDON, E.C.

London Chemists and Shippers are invited to call and inspect these articles.



FABRIQUE

DE

MATIÈRES PREMIÈRES DE
PARFUMERIE.

PARFUMERIES DE SEILLANS

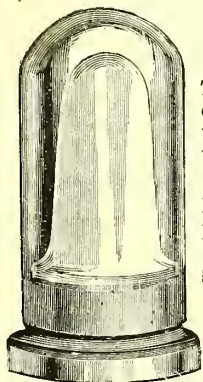
(7AR. FRANCE).

Flower Pomades. Perfumed Oils. Flower Extracts.
Essential Oils. Distilled Waters, &c., &c.

OF ALL WHOLESALE DRUGGISTS, OR WHOLESALE ONLY OF

R. C. TREATT, Dunster House, Mincing Lane, London

SHIRLEY'S A1 BRAND MENTHOL.



QUITE NEW.

The Menthol is fixed on a China Stopper, which is covered with a glass shade; always clean.

Buyer's own name printed round the China if order is given for a large quantity.

Doz. Style 26A. 6d. size.. 2/6
Style 27A. 1s. size.. 6/3

GOOD SELLING PATTERNS.

No.	Description.	Price per doz.
1	6d. Glass Bottles with Metal Screw Cap	3 3
1b	6d. Blue Ditto Ditto Ditto	3 4
9A	1s. or 1/6 Boxwood, Skittle-shaped	7 6
9c	1/6 or 2s. Do. Do.	9 6
9s	6d. or 9d., good value, Do.	4 0
17L	1s. Draughtsman Shape, Boxwood only, extra large	6 6
17s	6d. Ditto Boxwood	4 0
19	6d. Boxwood, Egg Shape, on elegant Card	3 0
21A	1s. Menthol on Boxwood stopper, covered with glass shade, very attractive, 12 in a box	6 3
23A	6d. Ditto Ditto 12 in a box	3 6
24	6d. Boxwood, Bottle Shape, very attractive	3 6

A Dummy Cone, 9 inches high, given free with all orders of 20s., or two if 30s. order is placed.

SPECIAL PRICES to LARGE BUYERS.

BOUND TO SELL.

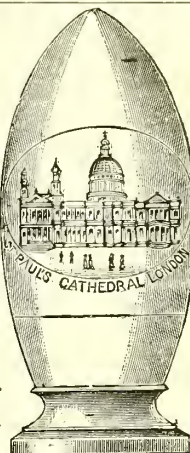
Menthol in Boxwood, with views of London on one side of the case, beautifully painted—St. Paul's Cathedral, Westminster Abbey, Windsor Castle, Tower of London, Westminster Bridge, Houses of Parliament. This is

A NOVELTY

and adds greatly to the value.

No extra is charged. 11A. 6d. .. 3/6 per doz. 14A. 1s. .. 6/3

Please state Views required when ordering.



Chemist's own name printed on back of the boxes without extra charge, provided a gross is ordered. This opportunity of advertising yourself and increasing your trade should not be lost.

ORDER AS A1 BRAND.

SHIRLEY'S 2nd QUALITY, PUT UP FOR THOSE WHO WANT CHEAP GOODS.

2d. No.	Per Dozen	Per Gross	4d. No.	Per Dozen	Per Gross
100.—Polished Willow Box	1/5	13/	103.—Boxwood Pedestal (large)	2/9	27/
101.—Willow Acorn	1/10	17/	104.—Barrel shape	2/9	27/
102.—Boxwood Pedestal	2/4	24/	105.—Button shape	3/4	34/

These prices are net, and the boxes have not the printed directions on them.

DON'T MAKE A MISTAKE!!!

The following Sell Well and bear a Good Profit:—

EAU DE COLOGNE

In flat watch-shape Bottles, with Nickel Cap.

Each Bottle is neatly labelled, and contains an ounce of best quality Perfume.

A GOOD SELLING LINE.

4s. per doz., 12 in a Box.

FULLER'S EARTH

Attractively put up in cardboard boxes, with label (3 colours).

Can be had either White Precipitated, as preferred by many, or ordinary Prepared Fuller's earth.

Price, 3s. per dozen.

Special terms for large quantities.

Order as A1 Brand.

TOOTH SOAP.

WHITE ROSE.

Nicely got up in a hinged patent Box (Jahneke's), neatly labelled.

The Soap itself is highly scented and fragrant.

4s. per dozen.

FUMIGATING RIBBON.

Elegantly put up in round blue and gold Boxes.

Indispensable to the Sick Room, as, after being lit a few minutes, a vapour ascends perfuming the whole room.

3s. 6d. per dozen.

A Show Stand given away with an order for 3 dozen, together with two yards of Ribbon to practically show its perfume.



SMELLING SALTS.

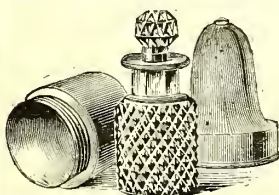
The best Bottle of the Season: it has a good base, and stands well; is attractively labelled, and enclosed in a hinged outer. Filled with strongest ammonia, and agreeably perfumed.

Price, 2s. per dozen, 20s. per gross.

Special quotations for 5 or 10 gross lots.

A similar Bottle, only stoppered, 4s. per dozen. 43s. per gross.

A CHARMING LITTLE NOVELTY!



An elaborately Cut Glass Bottle, enclosed in a Pocketable Case.

JUST THE THING FOR THE LADIES!

Specially adapted for Perfumes, Aromatic Vinegar, &c.

In Boxwood Case, with Screw Lid, 8/- per dozen; in Sycamore Case, with Puff-off Lid, 6/9 per dozen.

If 6 dozen Boxwood Cased ones are ordered, Chemists' own name printed on each, free of charge.

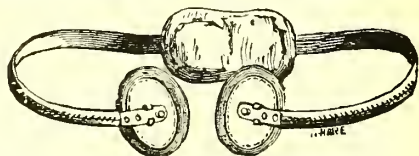
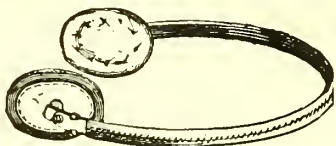
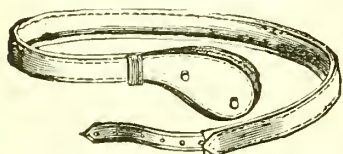
ARTHUR W. SHIRLEY, 30 Paternoster Square, LONDON, E.C.



TRUSSES.



THE BEST FOR SHAPE AND QUALITY. FIRST PRIZE, 1879.



MANUFACTURED THROUGHOUT ON THE PREMISES.
GREAT FACILITIES FOR MANUFACTURE AND QUICK DESPATCH OF SPECIAL TRUSSES.

BAILEY'S TRUSSES FOR SCROTAL HERNIA.

BAILEY'S INDIARUBBER TRUSSES FOR INFANTS.

MANUFACTURERS and DEALERS in all kinds of SURGICAL APPLIANCES, WHOLESALE and for EXPORT
Shippers and the Wholesale Trade Supplied on Best Terms and Lowest Prices.

W. H. BAILEY & SON, 38 Oxford St., LONDON

ILLUSTRATED CATALOGUE AND TERMS ON APPLICATION.

COCKING'S ADAPTABLE PORO-PLASTIC JACKETS AND SPLINTS.

Patentee and Sole J. T. COCKING, PLYMOUTH.
Manufacturer,

Cervical Jacket, No. 1. Cervical Jacket, No. 3.

INSTRUCTIONS
FOR MEASUREMENT.

JACKET

(in cases of slight deformity)

Circumference at axilla.

" waist.

" hips.

Length from axilla to great trochanter.

In severe angular cases circumference over apex of curve, position of ditto, and contour should be given; in lateral cases a description of the case.

In all cases it must be stated if for male or female.

CERVICAL JACKETS.

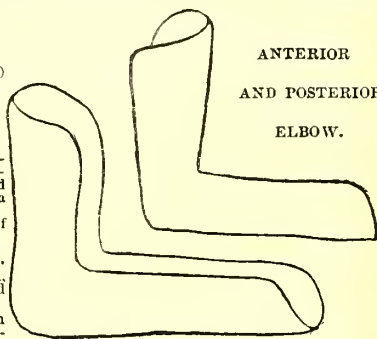
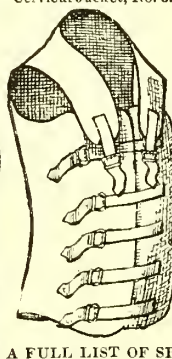
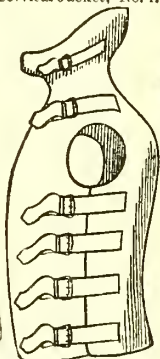
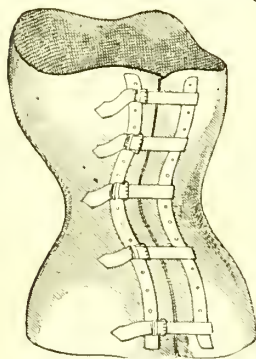
Same measurements required, and circumference at neck, and length from neck to axilla.

Any part of the Jacket can in the process of manufacture be left soft.

ANTERIOR

AND POSTERIOR

ELBOW.



A FULL LIST OF SPLINTS AND PORO-PLASTIC IN SHEETS MAY BE HAD ON APPLICATION

Telegrams—

"LINT LIVERPOOL."

LINT.

MANUFACTURERS OF

THE
LIVERPOOL PATENT LINT CO.,

MARK ST. MILLS,
NETHERFIELD ROAD NORTH,
LIVERPOOL.



FLAX, & COTTON,
LINTS,
ABSORBENT, AND CARDED
COTTON WOOLS,
ABSORBENT, OPEN WHITE, and GREY.
BANDAGES,
SURGEON'S, AND CARBOLIZED
TOW.

SPONGE PRICES CURRENT



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NOTICE !! All sizes of our Preparations of Petroleum Jelly can now be obtained **PROMPTLY** from any of the Wholesale Houses.

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CHESEBROUGH MANUFACTURING CO. CONSOLIDATED (NEW YORK),
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Proprietors and SOLE Manufacturers of the "VASELINE" Preparations.

SALOL.

The New Anti-Rheumatic, Antipyretic and Antiseptic.

This is tasteless, odourless and insoluble in the gastric juice. It agrees with the stomach perfectly, in this respect presenting a marked advantage over Salicylic acid and Salicylates.

"Therapeutically, the *anodyne* property of Salol is exhibited in the cases that are rheumatic in source. . . . The first triumphs of Salol were won in the treatment of *acute Rheumatism*, excelling as it apparently does all other remedies in its power to abate pain and lessen fever. If all the conditions be propitious, by the end of the second or third day fever and joint-pain and swelling will have disappeared."

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It is said to be as useful for topical application as Iodoform; and its powerful antiseptic properties render it serviceable in intestinal diseases of various kinds.

Dose.—The Tablets contain 5 grains each, the dose being from 10 to 30 grains.

BURROUGHS, WELLCOME & CO., Manufacturing Chemists, Snow Hill Buildings, E.C.

DRAPER'S INK (DICHROIC)

THE NEW BLACK INK, different from anything else ever produced.

Writing becomes a pleasure when this Ink is used. It has been adopted by the principal Banks, Public Offices, and Railway Companies throughout Ireland.

It writes almost instantly full black.

Does not corrode Steel Pens.

Dries rapidly on the Paper.

Is cleanly to use, and not liable to blot.

Flows easily from the Pen.

Blotting-paper may be applied at the moment of writing.

In Jars. 6d., 1s., and 2s. each.

Can be obtained, in London, through Messrs. BARCLAY and Sons, Farringdon Street; W. EDWARDS and Son, 157 Queen Victoria Street, E.C.; F. NEWBERRY and Son, Newgate Street; S. MAW, Son, and THOMPSON, Aldersgate Street; HAYDEN and Co., 10 Warwick Square, Paternoster Row; HOVENDEN and Sons, City Road; AYRTON and SAUNDERS, Duke Street, Liverpool; GOODALL, BACKHOUSE and Co., Leeds; JNO. HEYWOOD John Dalton Street, Manchester; JAMES HEMINGTON, 6 Moor Street, Birmingham; HENRY HODDER, Broad Street, Bristol.

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See "CHEMIST AND DRUGGIST," December 15th, 1874.

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PHARMACEUTICAL CHEMISTS, EXPORT DRUG MERCHANTS,

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Largely replacing the Mitcham Oils, 20/ lb.

Hydrobromic Syrup of Hypophosphites.

Fine quality, keeps well. Reduced price 5/6 lb.

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Lac Bismuthi et Cerii, &c.



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BRANCH OFFICE:

NORMANBY CHAMBERS, MELBOURNE.

Published every Saturday.

Subscription 10s. per year, payable in advance; dating from the commencement of any month.

Post free to every country in the world. Single copies, 4d. each

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Applied only to persons connected with the Trade.

For Australasian subscribers the subsidiary journal THE CHEMIST AND DRUGGIST OF AUSTRALASIA is included.

Literary Contents.

	PAGE		PAGE
Bankruptcy Reports	238	French Pharmaceutical News ..	235
Correspondence:—		Gazette	239
Move Forward	256	German Pharmaceutical News ..	236
Chapter of Biblical History ..	257	Leaderettes	250
Dispensing Notes	258	Legal Reports	238
Legal Queries	258	Medical Gleanings	244
Miscellaneous Inquiries	258	Metropolitan Reports	232
Bullation of Peppermint	257	New Zealand Tariff	242
Ants	257	Provincial Reports	233
Editorial Notes:—		Reeplees from the National For-	245
Descriptions	243	mulary	241
The Imperial Institute; The		Scientific Notes	241
New Siberian Trade Route ..	243	The Automatic Doctor	242
British Pharmaceutical Con-		Trade Marks Applied for	239
ference	249	Trade Report:—	
Foreign and Colonial	243	London	252
		New York	255

POST-CARD COMPETITION.—No. 3.

We invite post-card communications on any of the hundred subjects named on pages 158, 159, and 160 of THE CHEMIST AND DRUGGIST, August 4, and for the best we offer the usual prize of one guinea. Competitors may write their essays on one, two, or three post-cards. Subscribers or their employes only are eligible to compete, and all essays must reach us before August 31.

R. F. W. BRIDGES, one of the publishers of *The Chemist and Druggist of Australasia*, will make a tour through the United States, from San Francisco to New York, in the autumn. He will be glad to call on American firms en route who wish to talk with him concerning the drug business in the Australasian colonies, and those who wish to have an interview with him should address letters to the care of Messrs. John Taylor & Co., 112 to 120 Pine Street, San Francisco, Cal., or to the care of Mr. C. F. A. Hinrichs, 29 Park Place, New York.

THE CHEMIST AND DRUGGIST OF AUSTRALASIA, published monthly at our Melbourne office, can be supplied to subscribers outside Australasia at 5s. per annum, payable in advance, and commencing at any date. Chemists interested in the drug trade and the pharmaceutical affairs of the Australasian Colonies will find a full record of all events affecting their occupation in *The Chemist and Druggist of Australasia*. Single copies can be supplied at 6d. each. Application should be made by English or American subscribers to the office at 42 Cannon Street, London.

HEVREUL, the eminent French chemist, enters on his 10th year next Friday.

SOME DRUGGISTS' SPECIALITIES.

Country chemists will find a ready sale for liquid blister for veterinary purposes. It is far handier than the old-fashioned blister paste—

Liquid Blister.

Pulv. cantharid. ..	..	..	..	3ss.
Spts. terebinth. ..	..	..	..	3ij.
Hydr. bichlor. ..	..	..	..	3j.
Ol. origan. ..	..	..	..	3ij.
Tinct. canthar. ..	..	..	..	3vj.
" euphorb. ..	..	..	..	3j.
Ol. olivæ ad ..	..	..	..	3vj.

Macerate all together, except tinctures and corrosive sublimate, for seven days; then strain off, add the tinctures in which the corrosive sublimate has been dissolved.

1s. per oz. can easily be obtained.

An agreeable food for invalids is—

Iceland Moss Jelly.

Lichen, islandic. ..	..	..	..	3viiss.
Aq. ..	..	..	..	80 oz.

Boil to 60 oz. and strain. Then add

Cort. limous ..	..	..	..	3iiss.
Ichthyocoll. ..	..	..	..	3iiss.
Sacchari ..	..	..	..	3al.

Boil to 40 oz. and strain through jelly bag.

Leslie's Magic Liniment.

Lin. bellad. ..	..	..	..	7ss.
" aconit. ..	..	..	..	3ss.
Tr. opii ..	..	..	..	3ss.
Lin. saponis ..	..	..	..	3ss.

In 2-oz. long square vials. Wrapped and labelled lengthways. This article, under another name, has a great sale in Germany, where over a million bottles are sold annually.

A cheaper preparation, of which more can be given for the money, is—

The Household Embrocation.

Ol. rapii ..	..	..	..	3xij.
" terebinth. ..	..	..	..	3ij.
" succiui. ..	..	..	..	3ij.
Tinct. opii ..	..	..	..	3j.
Liq. vol. c. c. ..	..	..	..	3ij.

M.

4 oz. bottles, retail at 1s.

Fleur d'Orange Cold Cream.

Huile Fleur d'Orange ..	..	..	..	1 lb.
Aq. rose ..	..	..	..	1 "
Ceræ alb. ..	..	..	..	3j.
Cetacei ..	..	..	..	3j.
Ol. amygd. ess. ..	..	..	..	3vj.

M. s. a.

As a variety from the above may be mentioned—

Almond Toilet Cream.

Vasclini alb. ..	..	..	..	3vij.
Ceræ alb. ..	..	..	..	3ss.
Cetacei ..	..	..	..	3vj.

Melt; when nearly cold, add

Aq. ..	..	..	..	3ij.
P. boracis ..	..	..	..	3ss.

Stir, and add

Ol. amygd. ess.	q.s.
--------------------	----	----	----	------

Tinge delicate pink with ammoniacal solution of carmine.

Acidulated Taraxacum and Podophyllin.

Acid. nit. mur. dil. ..	..	..	..	mc.
Tr. nucis vom. ..	..	..	..	mxl.
Succ. taraxaci ..	..	..	..	3iiss.
Infus. gent. co. cone. ..	..	..	..	3iiss.
Aq. chlorof. ad ..	..	..	..	3x.

Dose: 1 tablespoonful.

Bottle in white French panelled bottles. The above quantity retails at 2s. 9d.

Metropolitan Reports.

FIRE—On Saturday evening last a fire broke out on the premises occupied by Mr. Rouse, chemist, at 12 Wigmore Street. Mr. James Lewis, a volunteer fireman, and lately hon. sec to the Fire Rescue Exhibition in Baker Street, happened to see the glare as he was passing, and by prompt action succeeded in preventing the extension and saving the premises without much damage resulting.

CHARGE OF FORGED ORDERS.—At the Guildhall Police Court on August 16, George William Hammond, described as an agent, of Blackfriars Road, was committed for trial on a charge of forging orders, by which he obtained three dozen bottles of eau de Cologne from Messrs. Hearon, Squire & Francis, wholesale druggists. The case has been previously reported. Mr. C. O. Humphreys, who prosecuted, brought a second charge against the prisoner of getting by a forged order 7 lbs. of cream of tartar and 7 lbs. of tartaric acid from Messrs. Evans, Lescher & Webb, of Bartholomew Close.

ILLICIT DISTILLATION.—Richard Odando Perkins (30), a cordial maker, was brought up at the Stratford Police Court on Wednesday on a writ of habeas corpus from Chelmsford Gaol, charged with using a still for the distillation of spirits without being licensed, and contrary to the statute, on May 25. Mr. Powell, who prosecuted for the Commissioners of Inland Revenue, said that the prisoner was now in prison on a conviction for unlawfully removing spirits, for which he was sentenced at the Thames Police Court in two penalties of 100% each, or two months' imprisonment in default. Subsequently it had been found that on his premises at 9 Elm Terrace, Leytonstone, in a loft, distillation was in active process; amongst the articles seized being two metal stills, a 65-gallon still, a copper worm, and a quantity of glucose. The prisoner said he thought the sentence he was now undergoing covered the present offence. After some consultation, the Bench said they were of opinion that the imprisonment of the prisoner was now undergoing did not cover this charge, and even if it did that punishment did not adequately meet the offence. They should impose a further penalty of 100% or three months' imprisonment. The prisoner said he could not pay the money, and he was removed to undergo the sentence.

THE WALTHAMSTOW CASE.—William Barber (39), chemist's assistant, charged on suspicion with causing the death of a young married woman, named Annie Mary French, by administering to her a certain noxious drug on July 21, was committed for trial by the Stratford magistrates on Saturday last, August 13. The principal evidence given at that hearing was that of Dr. C. Meymott Tidy, M.B., Professor of Chemistry at the London Hospital, and one of the official analysts at the Home Office. He said:—"I received on July 25 six jars and bottles, labelled as containing various viscera. None of the viscera showed anything abnormal except a slight congestion of the lung tissue. I was unable to detect any odour of chloroform when the bottles were first opened, nor did I do so after careful distillation. In No. 3 bottle, which contained the stomach and its contents, I operated on one-half of the contents. I found in this two-tenths of a grain of morphia. I could not find any other poison present. In bottle No. 6, which contained the bladder, I found a trace of morphia. I was not able to estimate the quantity, but I could trace well-marked reaction. The contents of the remaining bottles were examined for both mineral and organic poisons, but with negative results. I have no doubt the cause of death was morphia poisoning." Mr. E. H. Hamilton, Barber's employer, stated in evidence the particulars already given by us from an interview with him.

SUPPOSED TRICK—At the Lambeth Police Court on Tuesday George Sales (25), horse-dealer, was charged with being inside the shop, 79 Albany Road, supposed for the purpose of committing a felony.—The prosecutor, Mr. Matthews, a chemist, stated that the prisoner on Monday evening called at the shop and said a man was lying ill outside, and wanted relief. Prosecutor immediately went out, and found lying down in a cart a man, who said he was very ill, and wanted something to stop his bilious or sickly feeling. Prosecutor went back to his shop, made up the medicine and took it to

the man. The latter hesitated a long time before attempting to swallow the dose. Prosecutor in the meantime turned round and saw the man who had first called him behind the counter, and near the till. He seized hold of the prisoner, who, however, struggled and escaped. The man in the cart rose in a moment and drove off at a furious pace. A caretaker of the Mina Road Board school, hearing cries of "Stop thief!" followed the prisoner, and ultimately succeeded in holding him until Police-constable 303 M arrived.—The prisoner, upon first being charged, denied that he was the man who was in the shop, but two other witnesses were called, who positively identified him. Mr. Biron said it was, no doubt, an artful dodge to carry on a robbery, and he ordered a remand that further inquiries might be made about the prisoner.

THE STORES.—The report of the committee of management of the Civil Service Supply Association (Limited) for the half-year ended June 30, 1888, states that the number of members on the share register is 4,986, and the number of shares on the register 35,480. Tickets were issued to 8,920 members of the civil service, and to 25,903 friends of shareholders. Goods were bought to the amount of 733,634*l.* and sold to the amount of 857,880*l.* The stock in hand at the close of the half-year was valued at 300,380*l.* The gross profit on the trading amounted to 111,628*l.*, and the sum of 3,402*l.* was received from other sources of revenue, making the total gross income 115,030*l.* The working expenses were 88,282*l.*, being at the rate of 10*l.* 5*s.* 9*d.* per cent. on the amount of the sales. The net balance for the half-year amounts to 21,302*l.*, which, added to 4,116*l.* brought forward from last half-year, makes a total of 25,418*l.* Out of this amount the committee recommends that 12*s.* be paid in respect of each "A" or fully paid-up share; that each "B" share be credited with the proportionate amount in accordance with the rules; that 1,000*l.* be granted to the pension fund, and 250*l.* to the employees' provident fund. The sum of 2,943*l.* will then remain to be carried forward to the next half-year. The recently acquired freehold premises in Chandos Street have been valued with the view of ascertaining how much of the cost should be considered as premium properly attributable to the goodwill, &c. The amount has been fixed at 5,994*l.*, and the committee proposes that, instead of any addition being made this half-year to the reserve fund, the sum of 2,994*l.* should be written off, leaving a balance of 3,000*l.* to be dealt with on a future occasion.

AN EXCISE CASE WITHDRAWN.—At the Worship Street Police Court on August 16, among a number of Excise prosecutions, chiefly for keeping dogs without licences, the case of *Reg. v. C. J. Hewlett & Son*, wholesale druggists, of Charlotte Street, was mentioned. The information which had been laid against the defendants charged them with having in their possession sweet spirits of nitre in the preparation of which methylated spirit had been used, whereby they had incurred a penalty of 100*l.* On the case being called, Mr. Powell, for the Excise, said the prosecution was withdrawn.

In reference to the above case we have received the following:—

SIR,—As your attention and that of your readers may have been directed to the report in one or two of the daily newspapers of the withdrawal, by Her Majesty's Commissioners of Inland Revenue, of a summons which had been issued, at their instance, against our clients, Messrs. C. J. Hewlett & Son, wholesale druggists, of Charlotte Street, charging them with having in their possession sweet spirits of nitre in the preparation of which methylated spirit had been used, we think it only right to inform you and your readers that the reason why the summons was so withdrawn was because Her Majesty's Commissioners were satisfied, not only that the spirit in question was not manufactured by our clients, but that they paid the manufacturers the full market value for the article, and that consequently to have proceeded with the summons would have been doing our clients a great injustice.

We shall be obliged by your inserting this letter in your next issue. And remain, sir, yours obediently,

HYDE, TANDY & MAHON.

(Solicitors for Messrs. C. J. Hewlett & Son.)

33 Ely Place, London, E.C., August 22.

CAMPFIRE EXPLOSION AT MESSRS. HOWARDS' WORKS.—About noon on Wednesday a serious explosion and fire

occurred in the camphor department, which forms a part of Messrs. Howards & Sons' extensive chemical works at Stratford. These works occupy a considerable area of ground midway between Bow Church and Stratford Town Hall, and form part of the High Street. The greater part of the factory lies away from the road, being separated therefrom by the mill-stream; but that portion of the works where the accident occurred is adjacent to the main street. The building is constructed of timber girders with corrugated iron roof, and the camphor is sublimed in large glass carboys. The cause of the accident is supposed to be that one of these carboys broke, and some of the camphor, finding its way to the furnace, took fire, while the escaped camphor vapour, mixing with the atmosphere, was in a condition ready for explosion as soon as a flame occurred. The danger of over-heating is so well understood that over each vessel containing the camphor to be sublimed is an iron receptacle holding several hundredweights of sand, constructed in such a manner that by turning a lever the sand can be shot into the tanks, and any flame almost instantly extinguished. These were in good working order on Wednesday, and about half a ton of camphor was being operated upon. Two men, named Carsby and Smyth, were at work in the department when the explosion occurred, and the next moment the whole of the distillery was in a blaze. A rush was made to the lever, and the sand released; but, quick as the action was, it failed to stay the fire, and help was sent for to West Ham. The two men, Carsby and Smyth, were got out forthwith and sent to the hospital, and the factory engines set to work. Superintendent Smith arrived with his teamer from Stratford, and the deliveries from the two extinguished the fire in half an hour, though not until the camphor distillery had been gutted and the roof destroyed. Messrs. Howards inform us that the damage done, including the camphor lost, would be covered by 100%; but they fear that one of the men is seriously injured. They have reason to hope, however, that in neither case will the injuries prove fatal. The camphor made in the factory is that supplied in the old-fashioned bells. The blocks in which the greater part of their business is now done are manufactured in quite a different way, and such an occurrence is quite impossible in regard to these.

Provincial Reports.

Items of news, and newspapers containing matters of interest to the trade, sent to the Editor, will much oblige.

BATH.

THE BRITISH ASSOCIATION AND LOCAL HOSPITALITY.—This week's *Truth* returns to this subject. The writer says:—The *Times*, a few days ago, gave a glowing account of the preparations at Bath for the meeting of the British Association, which will considerably amuse people who are aware of the complete and ignominious failure of the desperate efforts which have been made to excite local enthusiasm. The *Bath Chronicle* dismally confesses that "the committee embarrassed by the difficulty of finding hospitable reception for some of the eminent savants among our expected scientific visitors," and it seems that so miserably meagre have been the offers from residents, that several of the vice-presidents of sections "are still awaiting an invitation, or the allocation of a temporary home. The result is that there is a dearth of domiciliary resources, and the inhabitants are earnestly begged to come forward, "as the honour of the city is involved in the issue." I cannot conceive why the members of the Association should not establish themselves in hotels or lodgings at their own expense, instead of cadging on the very palpably reluctant hospitality of the residents of the town on which they make their annual descent.

BEDFORD.

NOXIOUS PLANTS!—Farmers in Bedfordshire are at present feeling considerable anxiety in consequence of several horses and other animals having died in a manner which suggests

the belief that they have been poisoned through eating some noxious plant. Two horses belonging to Mr. William Gray, of Mill Street, Gamlingay, which were grazing in a meadow on the farm, were suddenly taken ill, and both succumbed in a very short time. A veterinary surgeon, on examining the bodies, found that where some partially digested food lay the coating of the stomach was covered with blisters as if from the effect of some vegetable irritant. Two valuable cows were also lost in Waresley Park, it is supposed from a similar cause. Suspicion attached to a variety of crowfoot, which during the late rains has largely increased in growth in boggy parts of the meadows. Several specimens of this plant were forwarded to the botanical secretary of the Bedfordshire Natural History Society (Mr. J. Hamson), who has come to the conclusion that the plant which poisoned the animals is the lesser spearwort (*Ranunculus flammula*), a very poisonous variety of crowfoot. It is rather uncommon, but the wet season seems to have been favourable to its development. Spearwort resembles aconite, hellebore, and other noxious members of the Ranunculaceae in its properties. From time immemorial, beggars have used spearwort to form artificial ulcers, and in parts of the Scotch Highlands it is still used for blistering purposes. Spearwort is a powerful epispastic.

BIRMINGHAM.

A "PROPRIETARY HOSPITAL," "which is to be well advertised," requires a surgeon. This is a new departure, and is likely to prove another source of danger to the pharmacist's calling.

IN THE WINDOW OF A SHOP in one of our suburbs appears the following announcement:—"General requisites can be obtained at this pharmacy as from all chemists, but no poisons will be supplied in either the British or British Homeopathic Pharmacopoeia." It has the appearance of a homeopathic dispensary, and the usual 6d. articles are sold at 4d., and we are informed that we can have the advice of fifteen years' experience free. From this it would appear that the man is not qualified.

HE WAS WILLING TO PAY.—While attending to the wants of several customers the other day, the assistant in Mr. Campson's chemist's shop in the Deritend observed one of the number to put in his pocket a tin of paint. As the thief was going away the chemist asked what he had got in his pocket, and out came the tin of paint. The thief was very sorry for his misconduct, offered to pay for the article, and was let off with a caution. Cases of this kind are of very frequent occurrence here, and it is to be hoped that an example will be made of the next offender—*pour encourager les autres*.

OPHTHALMIC SURGERY.—A signal distinction has been conferred upon our townsman, Mr. Priestley Smith, by the International Congress of Ophthalmologists, of Heidelberg, in asking him to open the association with Professor Snellen, at Utrecht, by a paper upon glaucoma. The paper was very well received. Mr. Priestley Smith has just been appointed by the committee of the Royal College of Surgeons to be Erasmus Wilson lecturer at the college for the ensuing year.

ILLICIT SPIRITS.—At the Sutton Coldfield Police Court on Tuesday, George James Byrne, of the Station Hotel, Sutton, was fined 40s. for having in his possession a quantity of illicit whiskey, and for other offences against the Spirits Act. In the course of the inquiry it was stated that some of the illicit whiskey which had recently been seized in Birmingham was mainly manufactured from sugar and potatoes. It was explained that it was the duty of retailers to test the liquor they received from the wholesale houses.

DEWSBURY.

A PINCH OF SALT TO PUT UPON THIS TALE.—We are informed, says the *Dewsbury Chronicle*, that a manufacturer of some patent compound went into the shop of a Mirfield druggist the other day with a bottle containing an unwholesome mixture. "I would give a sovereign," he said, "to know what would make the water and oil in this emulsion separate." The chemist looked at it. "Very well," he replied, "down with the dust." The man after some hesitation complied, and the chemist deposited the effigy of Her

Majesty in the till, and then quietly dropped into the liquid a pinch of common salt, when the oil and water instantly separated. The clever trick was the way in which the sovereign was secured by the chemist.

GREAT YARMOUTH.

CIGAR-SELLING ON SUNDAY.—At the local court the other day Charles Williams, a chemist, St. Peter's Road, was summoned for Sunday trading. Sergeant Green said he received information that defendant was selling cigars. About twenty minutes past nine on a Sunday he saw a gentleman go into the shop, buy a cigar, and come out again. Witness then went into the shop and called defendant's attention to the fact that he was selling cigars. Defendant replied that he was. Witness said he should have to report the case. Mr. Wiltshire, in defence, said that defendant was not a trader, but was a member of a profession. Further, he contended that tobacco was a drug, which he was allowed to sell. Tobacco was laid down in the Pharmacopoeia as a drug. The Bench inflicted a fine of 5s. and costs.

LIVERPOOL.

FIRE AT WIDNES.—The oil and grease works belonging to Messrs. J. White & Co. were on Monday morning completely destroyed by fire. The damage, which is very heavy, is covered by insurance.

SLIGHTLY OUT.—The London correspondent of the *Liverpool Mercury* gravely informs the readers of that paper that Australians are trying to kill rabbits by suffocation, the deadly instrument being "sulphuric acid and water, the fumes of which destroy the animals."

MORE CARBOLIC ACID POISONING.—Mr. Clarke Aspinall, in the police buildings last Saturday, held an inquest on the body of Fanny Shotman, a domestic servant of intemperate habits. Deceased was employed by Mr. and Mrs. Ball, of Fairclough Lane, who were absent at the time of the mishap. Shotman retired to rest as usual last Thursday night, and at half-past eight the following morning Miss Ball, not hearing the servant up, went into her room to rouse her. As she entered she heard a gurgling noise coming from deceased's throat, and noticing a bottle on the chair labelled "carbolic acid," the girl gave the alarm, and ran to her aunt's shop in Pembroke Place. Deceased was afterwards removed to the Royal Infirmary, where she died soon after admission, without speaking. It was stated that the carbolic acid was purchased by Shotman about twenty minutes past ten on Thursday night at the shop of Mr. Sant, chemist, West Derby Street. A verdict of "suicide" was returned.

STILL ANOTHER CASE.—Mr. Aspinall was engaged in another investigation of a similar character on Tuesday. The victim in this case was Mrs. Ann Shaw (58), wife of a carter. Deceased, who was given to drink, three weeks ago got some carbolic acid to kill vermin from Ann Hughes, the wife of a Corporation labourer. On Monday afternoon, while under the influence of drink, deceased appears to have drunk some of the acid, and Dr. Telford stated in evidence that the cause of death was carbolic acid poisoning. Deceased must have drunk far more than half an eggcupful (the quantity which Mrs. Hughes alleges she gave). Over an ounce of the burning liquid was almost certain to be a fatal dose. In answer to the coroner, Dr. Telford said that death from carbolic acid was the worst and most painful poisoning he knew. Its sale ought to be restricted. Its chief use was as a disinfectant, although, in his opinion, it was not as good as sanitas, which was dearer in price. A verdict of "suicide" was returned.

MANCHESTER.

The directors of Joseph Hobson & Co. (Limited), of the Victoria Mineral Water Works, Heywood, report a net profit of 271*l.* 4*s.* 9*d.* for the year ending July 31, 1888, which enables them to pay a dividend of 10 per cent.

DRINKING NITRIC ACID FOR WHISKY.—On August 22, Mr. S. Smelt, deputy-coroner for the city of Manchester,

held an inquest on the body of an old man named Lynch, a toymaker, who lived in Ancoats. The evidence showed that on the night of August 20 Lynch went to bed under the influence of drink. Early in the morning he got up for the purpose of getting another drink, and in mistake for whisky he drank a quantity of nitric acid which he was in the habit of using in his work. A medical man was called in, but the man never rallied, and he died on Wednesday morning. The jury returned a verdict of "death from misadventure."

THE DROWNING OF A CHEMIST'S ASSISTANT.—Mr. T. S. Hamilton, chemist and druggist, Ellor Street, Pendleton, sends to the local newspapers a statement relating to the drowning of his employé, Henry Wilde, reported in our last issue. Mr. Hamilton says: "No angry words passed between us, but being so late, by mutual agreement he was not to commence work until noon. This agreement was of long standing, and far more honoured in the breach than the observance, not having been enforced six times in as many years, nor did I then deduct from his salary at the week end anything for his half-day's absence from work. He simply had a few hours' ramble in the country, and used to come back bringing with him wild flowers and ferns; some of the latter we have now growing in our home. Neither I, his parents, nor those who were intimately acquainted with Henry Wilde believe for one moment that he committed suicide; that supposition is too absurd to bear investigation. The lad was of a lively disposition, and most willing, obliging, and good-natured." Mr. Hamilton goes on to say that the rumours which have been circulated are most painful to himself and wife, also to the boy's parents and family, and are, moreover, slanders on the dead, for however the poor boy came by his untimely end, he and all who knew him feel assured it was accidental, not suicidal.

PROPOSED MEDICAL ATTENDANCE ASSOCIATION.—Manchester, with its notoriously high death-rate—for some time its mortality returns have been higher than those of any other city in the kingdom—needs a good deal of attention from those who are engaged in the drug trade. Notwithstanding the extent of the requirements, we had imagined that they were already more than met by the private traders and by the provident dispensaries which have been established in the various quarters of the city and its suburbs. If we are to judge from a letter in the *Manchester Guardian* of August 22, this is altogether a delusion. The writer of the letter, Mr. E. R. Stanley Jones, states that "there are thousands of clerks, warehousemen, salesmen, shopkeepers, and others, ineligible for membership of the existing dispensaries, who in cases of frequent or protracted sickness by which they or members of their families are visited are sadly hampered with the doctors' bills necessarily incurred, and it is well known that a large percentage of the amounts due to medical men is never collected. Provident dispensaries are really co-operative societies, and the principle of requiring a uniform payment during health and sickness practically does away with unpaid doctors' bills. It relieves the members from all anxiety on that ground, and secures to the medical attendant the prompt discharge of the amounts due to him in respect of professional services. I am confident that no difficulty would be found in inducing a large number of medical men with high qualifications to accept appointments on the staff of a society to be called the Manchester and Salford Medical Attendance Association, which I now suggest should be formed." The members of the Manchester Pharmaceutical Association will do well to keep their eyes open in defence of their own interests. The association has not of late been so active as it once was, but the proposal here put forward, if ever it takes serious form, may have some effect in the way of infusing fresh life into the organisation.

SOUTH SHIELDS.

CARBOLIC ACID POISONING.—An inquest was held here on Monday on the body of a widow named Frances Franks. The evidence showed that while staying in a neighbour's house the deceased complained of being unwell, and shortly after leaving she was found lying in the back yard dead. In her possession was found a bottle containing carbolic acid. A post-mortem examination was made, and the stomach was

found to contain carbolic acid. Deceased had been six times in Sedgefield Lunatic Asylum, and the jury concluded that she had poisoned herself.

IRELAND.

DUBLIN.

FIRE.—On Wednesday, August 15, a fire broke out on the premises of Mr. Bernard J. Costello, pharmaceutical chemist, 8 Christ Church Place. Through the timely appearance and prompt exertions of Police-Sergeant Boland, the fire was prevented from spreading, and was extinguished in a very short time. The amount of damage done was not considerable.

BRITISH DENTAL ASSOCIATION.—The annual general meeting of this association was held in the School of Physic, Trinity College, on Thursday, and will be continued until to-day. Mr. J. R. Brownlie, L.D.S., of Glasgow, the retiring president, delivered his valedictory address in the anatomy theatre, and his successor, Mr. Daniel Corbett, M.R.C.S., Dublin, followed him with an interesting presidential address; thereafter a number of papers were read. Friday was to be devoted to demonstrations, and Saturday to pleasure.

SCOTLAND.

ABERDEEN.

NATIONAL REGISTRATION OF PLUMBERS.—At the distribution of diplomas in connection with the Worshipful Company of Plumbers in London, in Robert Gordon's College, on August 18, Sheriff Brown delivered a very interesting address, and referred to registration as "a preliminary to going to Parliament with a united front to ask protection to their interests by a system of Parliamentary registration. Of course," said the learned sheriff, "the ultimate object of that was that a plumber should stand just in the position of a registered physician, or a registered surgeon, or a registered chemist; in short, that being on the register shall be the only title conferring the right to engage in the trade and sue for accounts." The plumbers ought now to adopt as their motto the old adage, "Blessed are they that expect nothing, for they shall not be disappointed."

THE GREAT UNQUALIFIED ENJOY THEMSELVES.

Scene—A drug and general store within 100 miles of where a noble earl's body lay hid for twelve months.

Enters a local farmer, who asks for half-a-dozen lead and opium pills.

Unqualified attendant, who apparently had never heard of such a thing, thought they had some opium pills.

L. F. (dissatisfied): Is Mr. Blank (the owner, also unqualified) at home?

U. A.: No, he is away to the Glasgow Exhibition.

[*Exit* L. F., to suffer and wait.

DUMFRIES.

TRAFFIC IN METHYLATED SPIRITS.—Two boys, aged 11 and 13 respectively, were in the Dumfries Police Court last week committed to the industrial school by Provost Scott on a charge of stealing two horse-sheets. The Procurator-Fiscal stated that when the boys were arrested a bottle of "finish" was found on one of them, and the boy stated that he had been sent by his mother to the shop of Mr. Moore, chemist, for three-halfpennyworth of the stuff. In answer to the Provost, the lad said he had frequently gone to the same shop for "finish." He did not require to ask for anything; he merely held up the bottle. The Procurator-Fiscal said it was a perfect scandal that any respectable chemist should supply spirits of wine to such young boys. The Provost, referring to previous cases in the court, said this trade was really something terrible, and an attempt must be made to put a stop to it. He suggested that the excise authorities should be communicated with. The Procurator-Fiscal said he would send particulars of the case to the excise authorities in London.

EDINBURGH.

NARROW ESCAPE.—On August 16, while Mr. James Tod of Messrs. Mould & Tod, medical label printers), chairman

of the Edinburgh Chamber of Commerce, and Mrs. Tod were driving in a carriage and pair in the district of Upper Keith, East Lothian, the pole of the carriage broke, and the horses, becoming frightened, ran off. The carriage soon overturned, and Mr. and Mrs. Tod were thrown on the ground. Fortunately no serious injury was done.

THE DEAD SEASON.—The city is in the "dead" season at present. Many chemists, taking advantage of the absence of their customers, are enjoying a few days' rest in the country or by the sea. Even the cutting fraternity are finding no one to appreciate their "further reductions," and we hear of one of the most energetic of them "relaxing" himself in an historic town by the banks of the Tweed. Time was when it was said chemists did not enjoy themselves as other men; that they had not time to learn sports or amusements or acquire a hobby. We had a governor once who said a chemist should never smile. He himself acted up to his theory. To judge from what we see, chemists are now as capable of enjoying mundane frivolities as their fellows engaged in less responsible and less confining occupations.

HOW IRON RUSTS.—At Wednesday's meeting of the Iron and Steel Institute, held at the University here, an interesting communication was read on the chemical processes involved in the rusting of iron, by Professor Crum Brown. It was explained that the necessary conditions for the production of rust are—first, metallic iron; second, liquid water; third, oxygen; and fourth, carbonic acid—both the latter being dissolved in the liquid water. Water in the vaporous condition, even in the presence of carbonic acid and oxygen, does not affect the metal, except at high temperatures as in the formation of magnetic oxide of iron. Liquid water with oxygen dissolved in it does not act at ordinary temperatures on iron. This is shown by the fact that ordinary water exposed to the air does not rust iron if the water contains a substance such as lime or caustic alkali. As soon, however, as the lime or alkali is carbonised the water and carbonic acid begin to act upon the iron, the first result being the formation of ferrous carbonate, which subsequently is changed to bicarbonate and dissolves, and then to reddish-brown ferric hydrate. As in this process the carbonic acid gas is first absorbed and then given off again, the continuation of the process of rusting is not dependent on new carbonic acid absorbed from the air, but the original carbonic acid can carry on the process indefinitely, as long as liquid water is present, and oxygen is supplied from the air. Once the process is started, it goes on more rapidly, because the porous rust not only does not protect the iron, but favours, by its hygroscopic character, the condensation of water vapour from the air as liquid water. A piece of iron, therefore, which has begun to rust will continue rusting in an atmosphere not saturated with water vapour, an atmosphere in which a piece of clean iron will not rust, because liquid water will condense from such an atmosphere on the hygroscopic rust, but not on the bright iron.

FRENCH PHARMACEUTICAL NEWS.

(From our Paris Correspondent.)

ASPARAGINE IN EXTRACT OF BELLADONNA.—While dissolving watery extract of belladonna in alcohol lately, M. Houssaye noticed a copious granular precipitate, which on investigating was found to consist of asparagine.

PHARMACY IN TUNIS.—On August 8 I.H. the Bey appointed a commission to examine the diplomas of physicians, surgeons, and pharmacists practising in the Regency. The following will be its members for 1888: President, the Director of the Health Board, assisted by the Director of the Military Health Service; Drs. Casanova and Bensasson; the resident pharmacist-major, M. Kaddour; and pharmacists Desreumaux and Sinigaglii.

POTATO ROT appears to be amenable to the Bordeaux porridge (*Bouillie bordelaise*), which has proved so efficacious with the "black rot" of the grape-vine. M. Priileux relates that in a bed of potatoes, numbering some forty plants, which had shown signs of the disease, he took up nine, and after treating the tubercles with the "bouillie," replanted them

side by side with the sick plants. The result was that the coated potatoes were cured, and grew to ripeness, while among the other plants over one-third became diseased and worthless. The wash in question is a compound of lime, water, and copper sulphate; a formula was given in a former number of *THE CHEMIST AND DRUGGIST*.

COMMERCIAL KIRSCH.—According to M. X. Rocques, who ought to know, since he is connected with the Paris Municipal Laboratory, the subjoined is the formula mostly followed by Paris makers of "Kirschwasser distillé dans la Foie Noire":—

Alcohol of 94 degres	74 litres.
Water	124 "
Orange-flower water	2 "
Essence de noyau	20 grammes.

The essence in question, a regular article of trade, is a 12 per cent. alcoholic solution of oil of bitter almonds. The finest qualities are said to be made from the essential oils of peach and apricot seeds.

CHOLERA PREVENTIVE VACCINATION.—Last Monday a numerous audience filled the public seats at the Academy of Sciences to listen to the reading of a communication on the subject previously announced. M. Pasteur was to present a paper by Dr. Nicholas Galameia, of Odessa, on preventive vaccination against Asiatic cholera. Somehow but few academicians were in their chairs, while they were surrounded by ten times as many eager lay listeners—a state of things quite different from the usual course of affairs at the Society of Pharmacy meetings. But as the Academy of Sciences takes no vacation, many members quietly go to the country and leave empty benches behind. M. Pasteur looked tired and aged; his beard has grown white and his voice less firm and full. It must be confessed also the audience appeared rather disappointed because Dr. Galameia's experiments have been so far confined to animals. But the paper, although important, was only a preliminary notice, as it were, to claim precedence. In substance the experimenter found that the cholera virus, on being transferred from man to the guinea-pig, and from this animal to the pigeon, requires an extreme virulence. But the same exalted virus, after cultivation in the proper bouillon and heating to 123° C., will form an inoculating material quite reliable to render pigeons perfectly cholera-proof. The Odessa physician is so convinced he is on the right path that he ended his communication by requesting M. Pasteur's permission to come to Paris and repeat the experiments in his laboratory—first on animals, and finally on his own person. M. Pasteur, after agreeing in the main with Dr. Galameia's theories, and granting his request, so far as the laboratory is concerned, moved that the memoir be referred to the committee on the Bréant cholera prize. The proposition was adopted.

OUABAÏN AND STROPHANTHIN.—Not long since M. Arnaud announced to the Academy of Sciences he had discovered a poisonous glucoside in the wood of an apocynaceous tree, called in the Somali country (Eastern Africa) Ouabaïo, or Ouabayio. The natives use it to poison their arrows by simply extracting the wood with water, and evaporating the decoction to the proper thickness. On game the poison acts very much like strophanthus preparations, the wounded animal showing at first no apparent uneasiness, but after a short time dropping down suddenly paralysed. A log of the wood in question was recently brought to Paris, and yielded to M. Arnaud a glucoside which he found to have the formula $C_{30}H_{46}O_{12}$, while $C_{31}H_{48}O_{12}$ proved to be that of strophanthin. Owing to the great resemblance of the two glucosides, it was thought interesting to ascertain how their physiological effects would compare together. The investigation was undertaken by MM. E. Gley and P. Rondeau, and its first results have been communicated by M. Gley to the Academy. On the whole ouabaïn and strophanthin have been found to have very similar properties, both acting as heart-paralysers with like symptoms. But without entering into the particulars of the experiments, the main difference, if not the only one, is that ouabaïn will cause death more rapidly and in smaller doses than strophanthin will, whether administered hypodermically or given through the stomach. For instance, the lowest deadly hypodermic dose of ouabaïn for guinea-pigs was found to be on an average one-tenth of a milligramme for each one kilogramme weight of the animal, and 25 minutes' time to be necessary. With strophanthin

one-fifth of a milligramme and 50 minutes were requisite to the same effect. With dogs the proportions, both as regards deadly dose and speedy death, were slightly less in favour of ouabaïn, and still less with rabbits. But at the lowest estimate ouabaïn may be considered to be, on an average, twice as powerful hypodermically. When given through the stomach both poisons are much less dangerous, as dogs were made very sick, but not killed, with doses twenty-five times as large of ouabaïn, and over one hundred times of strophanthin. A remarkable feature about the new toxic substance is that, while poisonous barks, seeds, and leaves are known in great number and variety, poisonous woods are seldom spoken of.

GERMAN PHARMACEUTICAL NEWS.

(From our Berlin Correspondent.)

SIMULO.—Professor Eulenburg communicates to the *Therapeutische Monatshafte* an account of his experience with "Simulo," the fruit of *Capparis coviacea*. His report will hardly tend to promote the use of the drug, which was, it appears, first introduced into medicine by English enterprise. The professor observes that the price of the tincture is considerable, while he could not obtain any information from the most prominent Berlin botanists with regard to the source. His attention was drawn to it by the article of White in the *Lancet*, according to whose recommendations he administered it. With reference to its therapeutical effects, he informs us that the remedy is quite harmless; but he was not able to detect any evidence of its supposed anti-epileptic or anti-hysterical influence. The drug, he concludes, is not to be compared with potassium bromide.

LIQUEFIED GASES.—Some new regulations which have been published concerning the transport of liquid carbonic acid and nitrous oxide gases may be of interest to English export agents. It is ordered that the liquids must be filled into wrought-steel or wrought-iron vessels previously tested to a pressure of 250 atmospheres. The taps must be secured by special caps. The cylindrical form is not allowed unless it be designed in such a manner as to counteract the tendency to roll along plane surfaces. Carbonic acid gas will be also allowed if the pressure does not exceed 20 atmospheres, and it is to be kept in vessels similar to those above described; these latter must have been subjected to a pressure at least one and a half times as great as that which the contents will exert. Acids are also considered worthy of more attention as regards transport, and now, though they may be still stored in carboys, yet the hay or straw in which the vessel itself is packed must be impregnated with solution of calcic chloride, sodic sulphate or chloride, or ferric chloride, so as to diminish its tendency to ready inflammability. Other directions are given, but these apply only to Continental railway companies.

WAFFER-PAPER.—A new practical idea which may be appreciated by English manufacturers has recently been followed by German manufacturers of ordinary wafer-papers. This consists in issuing them with the customer's name and address embossed on each, as is often done with the wafer-paper cachets, so that the patient who uses them need not forget where he can obtain some more.

THE STAGE OF DEPRECIATION of some of our new remedies is arriving. Nussbaum says that it is unfortunate for the promise of the youthful ichthyol that it is claimed to be such a prodigy in the treatment of so many diseases, and Dr. Sonnenberger, writing of antipyrin in the *Theraps. Monats.*, descants at considerable length upon the unpropitious manner in which the remedy is being made to masquerade as a panacea, or "universal curer." He thinks the enthusiastic recommendation of the drug is likely to cause disappointment in the long run, when the excitement becomes moderated.

THE UNKNOWN PRESCRIBER.—A recent legal case shows how stringent are the restrictions on the art of dispensing here. A local chemist received a prescription ordering morphine, written by an American graduate whose signature was quite illegible. Now not only is it illegal to compound a prescription not really written by a medical man, but it is equally illegal to compound one the signature on which is

unknown to the dispenser. In this case the pharmacist did prepare the medicine, for which he had to pay 30s. to the offended Empire.

AN INTERESTING HOSPITAL CASE of a rather unusual character has been lately reported. A clerk, ostensibly suffering from some slight ailment, called at the consulting-room of the out-department just as a patient was being examined who had left his coat (containing his watch and chain, &c.) in the ante-room. Whether he thought some one had left it behind is not known, but at any rate he ran out with it, suddenly cured of his affection. Apparently the court thought that even the magic of the coat had not quite completed the cure, so they prescribed a twenty-one months' course of exercise, which the Government undertakes to direct and—enforce!

GERMAN HOSPITAL SYSTEM.—There are in Germany no hospitals similar to those which are so numerous in Great Britain, but something which is designed to take their place has been set on foot by Prince Bismarck. This is the system by which a number of funds are opened, and every employé, whatever his station or occupation, is obliged to subscribe. He is then entitled when taken ill to free treatment with medicine, and also to a certain amount of weekly support during the attack. No less than 19,238 of these institutions, called "Krauenkasse," are now in existence, including a total membership of 4,570,087. Some are of a general nature, but others are more exclusively of the guild nature, confining their members to individuals of certain trades; or they may consist of the employés of a large firm, &c. These are of particular interest and importance to the chemists, as many people will call upon a medical man for treatment and medicine when they can obtain it without special payment who would not do so if an extra expense was thereby incurred. Every case of illness—and there have been no less than 192,307—costs 31s. on the average, and the expenses for medicine which flow into the coffers of the pharmacist have totalled over 8,000,000 marks, or 4s. 9d. for each case.

THE TREATMENT AND DISTILLATION OF PEPPERMINT PLANTS.

R. ALBERT M. TODD, of Michigan, has recently read a paper before the New York State Pharmaceutical Association in reply to the query—"It has been claimed that the herb peppermint, when freshly cut, yields more oil than when dried. Is this so? and does the increased yield of oil compensate for the increased expense of shipping the fresh herb to the distiller?"

In the course of his communication, Mr. Todd stated that there are now cultivated annually in the United States (almost wholly in the States of Michigan and New York) over 20,000 tons of peppermint plants, yielding over 12,000 lbs. of essential oil, thus requiring on the average the production and handling of about 350 lbs. of plants in the undried state for a single pound of the essential oil. There are now in America about 250 small distilleries where the crude or natural oil is produced, each distiller distilling, besides his own crop, the plants of about ten neighbouring growers on the average, making the number of persons engaged in the industry as principals over 2,500, beside a large number of workmen employed in the cultivation and distillation.

The distillers' charge for working up the plants of other growers has by custom been based upon the number of pounds of oil obtained rather than upon the quantity of plants, the present rate in Michigan being 25c. for each pound of essential oil. This custom is most satisfactory to the grower, as he pays only according to his receipts; but it will be seen that it is not equitable for the distiller unless the plants are well dried prior to distillation.

The manufacturing system may be briefly noticed as follows:—The plants having been cut when in full bloom are driven to the distilleries either with or without curing, according to the notion of the grower. The essential features of the distillery are—first, a large boiler for the generation of steam; second, a pair of large wooden vats, about six feet in height, and of equal maximum diameter,

which are connected with the boiler by steam pipes, which enter them at the bottom (two vats being used so that one may be emptied and refilled while the other is running); third, a condensing apparatus, which consists of a series of pipes coated with pure tin, either with or without the ordinary "worm" over which cold water is made to flow continuously, this condensing apparatus being connected with the top of the distilling vats at pleasure by a duplex or "changing valve"; lastly, there is the "receiver," in which the essential oil is collected. The ordinary form of this is a metallic vessel about twelve inches in diameter and three feet in height, from the bottom of which an exterior pipe leads to a height nearly equal with the body of the receiver.

About three inches from the bottom of the distilling vats are placed "false bottoms" containing many perforations, underneath which the steam enters from the boiler. It is into this vat that the plants are placed to one-third fill it; then the steam is turned on, and, passing through the false bottom, permeates the plants, its action being two-fold—(1) it softens the cellular tissue, and (2) causes an expansion of the particles of oil, so that they burst forth from their miniature prisons, and are carried off with the current of steam. The steam thus becomes charged with essential oil, and is carried off and condensed, the oil being collected as it accumulates on the surface of the condensed liquid. Distillation can be effected with three-fold the rapidity from the dry plants, for the effect of drying is to soften the plants, allowing a larger quantity to be used for a charge, while such large charge can also be distilled in one-half the time required for a smaller quantity of green plants. But many growers, fearing that a loss of oil results from drying by diffusion in the atmosphere, cannot be prevailed upon to bring their plants to the distilleries in other than a green state.

The paper contained figures in proof of the author's assertion. Thus 2,000 lbs. of dried plants yielded 20 lbs. of oil in thirty minutes, and a similar charge of fresh plants yielded only 2 lbs. of oil, an hour being required for distillation. Then two loads of plants from the same field were taken and equally divided; one portion was exposed to the sun for two days, and thus dried. It was then kept in a drying loft for six months. The other portion was at once placed in the still. The undried plants, weighing 2,332 lbs., produced 6 lbs. 9 oz. of oil = 1 lb. for each 355.35 lbs. of plants, or 0.2814 per cent. The second portion six months afterwards yielded 1 lb. of oil for each 362.5 lbs. of original green plants, the slight loss being accounted for by the portion of leaves and blossoms which dropped off in rehandling. The charge of fully dried peppermint had lost 49.4 per cent. of its original weight. From these and other observations Mr. Todd concludes that—

First, in peppermint and other American essential oil plants, no perceptible loss of the essential oil is occasioned by drying in the open air at ordinary temperatures.

Second, when the drying of the plants is continued through many months, a slight oxidation of the oil in the leaf occurs, decreasing its solubility and increasing its specific gravity; also raising its boiling-point through the formation of a non-volatile and insoluble resin.

Third, a long exposure of the plants to atmospheric action prior to distillation does not affect the crystallising tendency of the essential oil, nor other of its physical tests except those noted above.

Fourth, to obtain the best results, the plants should be dried thoroughly, and distillation should take place as soon as possible thereafter.

ADULTERATION OF SPANISH WINES.—An order recently issued by the Spanish Government states that in accordance with the report of the Royal Academy of Medicine and the Royal Council of Health, wines answering to the following description, or containing any of the substances named, will be considered adulterated:—1. Natural wines which contain impure industrial alcohol and alcohol from the husks (casaca), if they are not rectified and purified. 2. Salicylic acid and other antiseptic substances. 3. Foreign coloured substances, those derived from the products of "pit coal" (*productos de la hulla*), as well as from vegetable or whatever other origin. 4. Artificial glucose (azúcar de fécula), sugar from flour or new wine. 5. Glycerine.

Legal Reports.

THE DENTISTS ACT.

AT Worship Street Police Court on Tuesday Mr. Bushby delivered judgment in the prosecution of Messrs. Coe and Hunter, summoned as "doctors," of the American Dental Association, 44 Finsbury Square, for having within the past six months taken and used the letters "D.D.S." or some other name, title, or description implying that they were registered under the Dentists Act, 1878, or were specially qualified to practise dentistry, they not being registered. Mr. Bushby said:—The question here is whether the defendants, by describing themselves as "Doctors of Dental Surgery," of Pennsylvania University and Boston College respectively, have used titles implying that they were registered under the Dentists Act, 1878, or that they were specially qualified to practise dentistry. In either case, since they were not in fact registered, they would be liable under the third section to a penalty of 20*l*. The Act seeks to protect the public against quacks and knaves by providing (among other things) that persons styling themselves dentists must be on the register, and are liable to be struck off for misconduct. Before being registered they must satisfy the General Registrar that they have proper certificates of competency, and only such foreign certificates are admissible for the purpose as are recognised in the list published by the General Council. Now, certificates from Pennsylvania University and Boston College are not included in this list. I think, therefore, that the defendants cannot be said to have used titles which imply registration, and the only remaining point is whether the titles imply a special qualification to practise dentistry. It was urged for the defence that the words "specially qualified" must be restricted to recognised qualifications, such as "D.D.S. of Michigan," or "D.D.M. of Harvard." But this would go far to cripple the Act, for the only titles verbally specified in the third section are "dentist" and "dental practitioner," and if persons by merely substituting such equivalents as "dental surgeon" or "doctor of dentistry," or, as the defendants have done here, "doctor of dental surgery," could escape, the protection to the public would be slight indeed. On the other hand, if the Legislature meant to enforce registration on every one using a title which implied that he was specially qualified to practise dentistry in any way whatever, that person would come within the Act as effectually as if he styled himself a "dentist" or "dental practitioner." The latter seems to me the rational view, and I therefore convict the defendants. Mr. Waddy has dwelt on the hardships of their particular diplomas being unrecognised as titles to registration. But before practising here I do not see why they should not have qualified by the means open to English dentists. Taking into consideration, however, that the clause might have been more clearly expressed, and no question has been raised as to the genuineness of the diplomas assumed by the defendants, I think it will be sufficient to impose in each case a fine of 5*l*. and 2*s*. costs. The solicitor for the defendants intimated that he would give notice of appeal.

USING A SHILLING ON LABELS.

MR. H. J. DALGLEISH in reply to a query in last issue says, the use of the reverse side of a shilling on proprietary labels and printed matter generally, is by no means a new idea, and as the representative of a leading label printing house he has often used it, especially upon labels for toilet requisites, and has never heard of any of his customers having to discontinue the same.

FAILURES AND BANKRUPTCY REPORTS.

WILLIAM CLAYTON, late of Edith House, Hammersmith, Doctor of Medicine.

MR. REGISTRAR GIFFARD, at the London Bankruptcy Court, allowed this debtor to pass his public examination upon accounts showing gross liabilities of 192*l*. 1*s*. 1*d*., of which 182*l*. 11*s*. 1*d*. is expected to rank against assets valued at

137*l*. 5*s*., after allowing for preferential claims of 9*l*. 10*s*. The debtor stated he had practised in London for the last twenty-five years, and had never been in difficulties before last March. He was then two quarters behind with his rent, and execution was put in by the landlord's agent, although he had rented the house for eighteen years, and had kept the inside in repair and paid insurance. The rent was 62*l*. per annum. In order to meet the landlord's demands the debtor went to a money-lender, who paid out the men in possession, and obtained the debtor's signature to an agreement for 60*l*. and interest to be paid by monthly instalments of 4*l*. The debtor paid the first instalment, and on failing to meet the second, which fell due on June 19 last, the money-lender removed the debtor's furniture and lease, which had shortly before been valued together at 300*l*. The debtor then left Edith House, and is now living in furnished apartments. The learned Registrar ordered the examination to be concluded.

Re LOCKWOOD & LEITH, St. Helens, Chemical Manufacturers.

AT the Liverpool Bankruptcy Court on the 17th inst., before Judge Thompson, Mr. Mulholland applied on behalf of these bankrupts for their discharge. At a first meeting of creditors, on the 26th of March, a composition of five shillings in the pound was offered on the joint estate, and accepted, but the second meeting did not confirm this, and at the second adjourned meeting, held on the 3rd of May, it was resolved that the debtors be adjudged bankrupt, and Mr. George Nicholson was appointed trustee, with a committee of inspection. A composition of 3*s*. 4*d*. on the separate estate of William Lockwood, and of 20*s*. on that of John Leith, were also offered, but, owing to the resolution of the joint creditors, could not be carried through. The joint statement of affairs showed a total indebtedness, after allowing for securities held by creditors, of 26,100*l*. 7*s*. 7*d*., whilst the total assets amounted to 6,107*l*. 1*s*. 10*d*. Lockwood's separate estate showed liabilities 1,211*l*. 12*s*. 6*d*., and assets 276*l*. 7*s*, leaving a deficiency of 935*l*. 5*s*. 6*d*.; and the separate estate of John Leith, liabilities 279*l*. 12*s*. 10*d*., against assets 355*l*. 16*s*. 11*d*., leaving a surplus of 76*l*. 4*s*. 1*d*. The trustee had sold the joint estate for a sum sufficient to pay the joint creditors 7*s*. 6*d*. in the pound after paying costs. On the separate estate of Lockwood the trustee expected to pay 3*s*. 2*d*. in the pound; and the separate creditors of Leith had been paid 20*s*. in the pound. The official receiver said he found that the bankrupts had continued to trade after knowing themselves to be insolvent. They knew that they were insolvent in December, 1886, when their books showed a debit balance of 5,444*l*. 19*s*. 8*d*. He had no evidence that the bankrupts had committed a misdemeanour under the Bankruptcy Acts.—Mr. Mulholland said there had been no attempt at concealment on the part of the bankrupts, and all through the proceedings the official receiver had complimented them on the admirable way in which they had kept their books. The committee of inspection, at a meeting held on the 16th May, also unanimously recorded their appreciation of the conduct of the bankrupts, particularly in regard to the full disclosure of their assets, and expressed the hope that the court would see its way to grant the application for discharge.—Mr. Collins supported the application on behalf of a number of creditors, and there being no opposition, his honour made an order for the discharge of the bankrupts in three months.

Re H. F. COX.

THE debtor, trading as a chemical manufacturer in Chick-sand Street, Whitechapel, under the firm of H. F. Cox and Co., has filed his petition, and upon the application of Mr. M. J. Letcher a receiving order was made. The assets are estimated at about 1,300*l*.; the amount of the liabilities was not stated.

Re W. B. RILEY, 74 King Cross Street, Halifax, Druggist.

A PETITION has been filed in the Halifax County Court in this case. The liabilities are said to be about 125*l*. and the assets about 30*l*.

TRADE-MARKS APPLIED FOR.

THE *Trade Marks Journal* publishes the following notice:—"Any person who has good grounds for objection to the registration of any of the following marks may, within two months of the date of this journal, give notice in duplicate at the Patent Office, in the form 'J,' in the second schedule to the Trade Marks Rules, 1883, of opposition to such registration." The address of the Patent Office is Southampton Buildings, London, W.C.

From the "*Trade Marks Journal*," August 22.

SANITIVA "and other wording on fancy label; for a patent medicine. For the Sanitiva Company, 17 Collett Road, Bermondsey. 69,436.

SULPHATE OF QUININE, "and other wording on three labels $\frac{1}{10}$, $\frac{1}{5}$, and $\frac{1}{2}$ oz.; for the same. By Schröder, Smidt & Co., Bremen. 72,652.

THE ANGLO-ITALIAN SAUCE, "and designation of depositor; for a sauce. By Miriam Payter, trading as M. Payter, Cassano & Co., 1 Alfred Place, Thurloe Street, London. 72,982.

IODIA "and designation of depositors on label; for a medicine for human use. By Battle & Co., St. Louis, Missouri. 74,683.

FRY'S 'VELOCITY' PAINT REMOVER; "for a paint remover. By Livett, Frank & Son, 22 Borough High Street, S.E. 75,451.

design, including heads of a man, a horse, and a dog, with "Romane licum" and other wording on band; for a liniment for horses and dogs and a liniment for man. By John G. Line, who will trade as Line Romane licum Company, 54 Silver Street, Newport Pagnell. 75,983-4.

VISCERAL; "for a medicine for human use. By H. Crane, jun., 49, Eastboro', Scarborough. 75,983.

'AUGH-A-BALLAGH; "for medicines for human use. By The Enaline Company, Milford Haven. 76,043.

JURACOA LIME FRUIT CORDIAL "and other wording on label; for lime fruit cordial. By W. E. Hiscock, Perrott Street, Salthouse Lane, Hull. 76,421.

MONKEY, "under figure of a monkey; for varnishes, paints, &c., and oils. By Lockwood Brothers, Arundel Street, Sheffield. 76,617-8.

HEVALINE; "for medicinal pomade, lip salve, &c. By Watkins & Souby, St. Helens. 76,657.

THE CAMEL BRAND, "under figure of a camel, for caustic soda. By Bessler, Waechter & Co., 123 Bishopsgate Street Within, E.C. 76,710.

ENTODYNE, "over figure of two towers and ship; for a cure for toothache. By James Selkirk, 7 Pembroke Street, Cork (by consent). 76,836.

Alldie device (lion rampant in oval) for antiseptics and the like. By T. G. Gibbons, 41 Market Street, Manchester. 77,056.

THE NIGGER JOCKEY BRAND HARNESS COMPOSITION, "on fancy label; for harness composition. By Annie Parker, 1 Park Grove, Bromley. 77,274.

LEON'S ALMOND POPOLINE EMBROCATION, "British Hygienic Society's Melanite Liquid Blacking," "British Hygienic Society's Almond Popoline Dentifrice," "British Hygienic Society's Almond Popoline Toilet Powder," "British Hygienic Society's Almond Popoline Tooth Powder," and "British Hygienic Society's Almond Popoline Tooth Paste"; for the respective articles. By Marcus Leon, trading as The British Hygienic Society, Warwick House, Christchurch Road, Brondesbury (77,296-301). Also "Leon's Almond Popoline Lotion"; for the same. 77,394.

CK'S HEALINE, "on device (figures of animals' heads in box); for an ointment for veterinary purposes. By C. E. Reinhardt, trading as John and Charles Dick, 17 Farringdon Street, E.C. 77,360.

Gazette.

THE BANKRUPTCY ACT, 1883.

RECEIVING ORDERS.

Cox, Henry Frederick (trading as H. F. Cox & Co.), Thornton Heath, Surrey, and Chicksand Street, Whitechapel, chemical manufacturer.

Riley, William Bilton, Halifax, druggist.

Robinson, Roland, Birmingham, drysalter.

Wilton, William, Cuckfield, Sussex, late of Brighton, surgeon and apothecary.

FIRST MEETINGS AND PUBLIC EXAMINATIONS.

Baker, Alfred, jun., Regent Street, chemist—first meeting, August 29, 33 Carey Street, Lincoln's Inn Fields; public examination, September 27, 34 Lincoln's Inn Fields.

Riley, William Bilton, Halifax, druggist—August 31, Official Receiver's office, Halifax; October 16, County Court House, Halifax.

Wilton, William, Cuckfield, late of Brighton, surgeon and apothecary, August 28, Official Receiver's office, Brighton; September 27, Court House, Brighton.

ADJUDICATIONS.

Dards, Joseph, Old Kent Road and London Road, mineral water manufacturers.

Riley, William Bilton, Halifax, druggist.

Wilton, William, Cuckfield, Sussex, late of Brighton, surgeon and apothecary.

ORDERS MADE ON APPLICATIONS FOR DISCHARGE.

Marr, David, High Holborn, surgical instrument maker—discharge suspended for three months.

Oakley, James, Birmingham, druggist and drysalter—discharge refused.

EXTRACTS FROM THE REGISTER OF DEEDS OF ARRANGEMENT.

The following deeds of arrangement with creditors have been filed at the Bills of Sale Office, under the provision of the Deeds of Arrangement Act, 1887. Some of these deeds are for the purpose of carrying out compositions with creditors (and such are specified below), but the great majority of them are "assignments" in the ordinary form, to a trustee or trustees, for the benefit of creditors. The Act referred to expressly provides that registration shall not give validity to any deed which is an act of bankruptcy, and there is no provision, in the Act, making any of these arrangements binding upon dissenting creditors.

Re ROBERT HENRY FLETCHER, 89 Agincourt Street, Heywood, Manager to a Manufacturing Chemist.

	£	s.	d.
Walker, Williams & Sons, Bolton	452	0	0
Hill, James, Castleton	28	0	0
Manchester and Liverpool District Banking Company, Heywood	338	0	0
Pickford, Dr., Heywood	160	0	0
Wilton, Earl of, Manchester	40	0	0
Hill, John, & Co., Rochdale	22	0	0

Re THOMAS HENRY HARWOOD, Saint Columb, Cornwall, Chemist and Druggist.

Creditors over 10l.

	£	s.	d.
Boyle, Dr. Thomas, Newquay	14	15	6
Evans, Gadd & Co., Exeter	85	15	1
Percy & Anstey, Truro	12	11	4
Rowse, J., Roche	22	10	0
Slade & Pooley, London	19	16	8
Townsend, Messrs., Exeter	11	13	10
Willyams & Co., St. Columb	16	0	0

CONUNDRUM.—She: "Why is chloroform like Abraham?" He: "Is that a conundrum?" She: "Yes." He: "Well, I'll give it up." She: "Oh, don't do that. Make one guess at least." He: "All right. Because chloroform is not ether, and Abraham isn't either. Is that it?" She: "No." He: "Well, what is it?" She: "I don't know. I forgot, and thought you might guess it."

Trade Notes.

QUININE BITTERS MANUFACTURING COMPANY (LIMITED).—Notices of allotment in this company were posted last week.

MESSRS. B. G. LENNON & CO., of London and Port Elizabeth, have removed their office here from Edmund Place, Aldersgate Street, to 14 Bunhill Row, E.C.

J. C. & J. FIELD (LIMITED) have declared a dividend of 12s. per share on the ordinary shares, making with the interim dividend 10 per cent., and a dividend at the rate of 7 per cent. per annum on the preference shares.

MR. ARTHUR W. SHIRLEY, of Paternoster Square, has transferred his Australian agency from Messrs. Joseph & Co. to the Australian Drug Company of Sydney, with whom he has a complete selection of his menthols and other specialities.

THE HOMŒOPATHIC CONVALESCENT HOME recently opened at Eastbourne, which is working in connection with the London Homœopathic Hospital in Great Ormond Street, has been fitted throughout with patent self-aerating silicated carbon filters.

MESSRS. C. F. BOEHRINGER & SÖHNE, of Mannheim, announce that they have just commenced the manufacture of glycerine, and are prepared to execute orders on that article in all its varieties. Among the new pharmaceutical preparations added to their list are duboisin, curare, resina scammonie e radice, and tinctura hamamelidis.

MR. THOMAS CHRISTY, who was chiefly instrumental in obtaining from the Board of Customs permission to use refuse tea for the manufacture of caffeine in this country, sends us a sample of the chemical manufactured, we understand, by Messrs. Howards & Sons. We also notice from an advertisement published by Mr. Whiffen, of Battersea, who has likewise commenced the manufacture under similar conditions, that he is now prepared to supply the alkaloid.

BRAND'S BEEF BOUILLON.—We have received a sample of Messrs. Brand & Co.'s latest delicacy, this being a tin of very concentrated beef bouillon. A teaspoonful of the article, added to a breakfast-cupful of boiling water, makes an admirable broth, well flavoured and of substantial nourishing value. It is decidedly economical as well as convenient to use this preparation, and the most fastidious cannot find fault with the flavour. The tins in which the bouillon is supplied are a new patent, which, though quite air-tight, can be opened by the fingers.

MARRIAGE.

[Notices of Marriages and Deaths are inserted free if sent with proper authentication.]

WHALL—BAXTER.—On August 16, at the Priory Church, Worksop, Notts, by the Rev. Henry T. Slodden, vicar of the parish, assisted by the Rev. Edward Haversham Whall, curate of Hunstanton, Norfolk, brother of the bridegroom, Charles Albert Whall, solicitor, Worksop, to Isabel, only daughter of George Baxter, pharmaceutical chemist, Worksop.

DEATHS.

DENHAM.—On August 18, at High Row, Richmond, aged 66, Mr. William Denham, chemist and druggist.

HODGE.—On August 17, at South Tay Street, Dundee, Mr. James Hodge, L.F.P.S.G., chemist and druggist, Overgate, aged 48. The deceased gentleman was secretary to the Dundee Chemists' Association for several years, and while acting in that capacity was appointed local secretary to the British Pharmaceutical Conference when that body visited the town in 1867. For his services on that occasion Mr. Hodge received a handsome present from his local *confrères*. Some fifteen years ago Mr. Hodge began to study for the medical profession, and received the licence of the Faculty of Physicians and Surgeons, Glasgow, in 1880, and has practised in Dundee since, also holding a parochial appointment. He still kept on his drug shop in the Overgate, but his consulting-room was in Tay Street.

Personalities.

A COMMITTEE organised by Dr. George Johnson has been formed to promote a testimonial to Sir William Bowman, F.R.S., in recognition of his services to ophthalmological and physiological science. It is intended that the testimonial shall take the form of a portrait of himself, to be painted by an eminent artist, together with a reprint of some of Sir W. Bowman's works.

CAPTAIN PROBYN, of the firm of Hooper & Co., chemists, Pall Mall and Grosvenor Street, who is already a member of the London School Board and of the St. Martin's Vestry, is spoken of as the probable successor to Mr. W. H. Smith as Conservative representative of the Strand in Parliament, whenever the latter gentleman is transferred to the House of Lords.

NEW COMPANIES.

ASHLEY'S (FOREIGN-MADE) BOTTLE COMPANY (LIMITED). Capital 170,000*l.* in 17,000 Seven per Cent. Preference shares of 5*l.* each, and 17,000 ordinary shares of 5*l.* each, with power to increase the capital. Object, to purchase letters patent, inventions, rights and privileges (whether subject to royalty or otherwise) in connection with glass bottles, or any past interest in such letters patent, whether in the United Kingdom, the British colonies, the United States of America, or abroad; and in particular to enter into and adopt certain agreements made between John Hardcastle and Howard Matravers Ashley of the one part and John Charles Cottam of the other part, and an agreement made between John Charles Cottam of the one part and Alfred Charles Dockerill, as trustee of the Commercial Trust and Agency, Limited, of the other part, for the purchase of certain rights in respect of an invention for the manufacture of glass bottles and other glass hollow ware, and for working the same abroad. The first subscribers are:—J. Spencer, 9 Alcanbury Road, Upper Clapton; A. R. Theggy, 10 Balfour Road; C. A. Holwell, Buckhurst Hill, Essex; J. H. Thayer, 101 Fernhead Road, N.W.; F. Sissons, 7 Buckingham Road, Kingsland; E. B. Howard, Walworth, S.E.; H. Hulls, 20 Marcia Road, S.E.; and the first directors are to be G. W. Hastings, M.P., D.L., J.P.; Col. C. F. Surtees, D.L., J.P.; F. R. Bullock; R. Ingham Clark, J.P., F.L.S., F.C.S.; and Chas. Brook Dobson, M.A.

RUSSELL, CORDNER & CO. (LIMITED).—Registered by Burne and Berridge, 9 and 10 Pancras Lane, E.C., with a capital of 100,000*l.* in shares of 10*l.* each. Object, the purchasing and acquiring the goodwill of the business of Russell, Cordner & Co., and the offices, furniture, fittings and fixtures in connection therewith, at present carried on by William James Cordner and Wm. Hodge, at 38 Nicholas Lane, E.C., and the carrying on of the said business.

AT THE COUNTER.

THE following is copy of an order sent to a chemist in Wales:—

"1 lb. of repsansols [? Epsom salts].

"1½ lb. of tregle.

"1 oz. Sinshir after grind."

I had better add for the benefit of your English readers that the last line is a Carmarthenshire way of expressing "ground ginger." J. T. C. (41/102.)

FROM Norwich: "1*l.* worth of Civil orange Peel, and 1*l.* worth of Genteel Root."

"WHY, Pat, for heaven's sake what is the matter?" "Well, sorr, I swallied a pertater bug, and although, sorr, I took some parrus green widin five minutes after ter kill th' baste, shtill he's just raisin' the divil inside o' me, sorr."

Scientific Notes:

Chemistry, Pharmacy, Botany, Materia Medica, &c., Original, Selected, and Translated.

NORTHERN AND SOUTHERN SPERMACETI.

IN a discussion on a paper recently read before the Society of Chemical Industry, a speaker remarked that spermaceti, derived from the sperm whale, never showed any difference in its luminosity. The variations found in photometric experiments were probably to be accounted for by the candles having been made from spermaceti derived from the little-nosed whale found in the Northern seas, the luminosity of which was greatly inferior to that of the spermaceti of the sperm whale of the Southern fisheries. It was afterwards explained that the variation referred to was really due to variation in the size of the wick and other mechanical conditions, but the fact remains that the Northern and Southern spermacetis are distinct substances.

ALGÁLIA.

IN a recent trade report of a German firm of essential-oil distillers exception is taken to a volatile oil, commercially named at what is stated to be an excessive price, under the name of "Algália" oil. It is said that algália is a purely fancy name, and that the oil itself is nothing but the essential oil of musk or ambrette seed. With reference to this statement D. T. F. Hanausek points out, in the *Zeitschrift des Oesterr. Apotheker Vereins*, that algália is not a fancy word, but is Spanish for civet, and also for civet-cat, and further that musk seed is also known under that name in Spanish-America, a consignment of this seed having been sent to the Vienna International Exhibition of 1873 under that name from Venezuela.

DETECTION OF SACCHARIN.

SACCHARIN is a sulphur compound soluble in ether, and may be dissolved out from anything by that solvent used in the proportion of about three times its volume, and the period of digestion extended over twelve hours, with frequent agitations. The ethereal solution is drawn off and evaporated, and the residue carefully ignited in a crucible with carbonate and nitrate of sodium, whereby the saccharin is converted into sulphate of sodium, and can be estimated as barium sulphate.

Mr. A. H. Allen read a note on this subject at a recent meeting of the Society of Public Analysts. In the course of the paper he stated that an aqueous solution of saccharin when heated with potassium ferricyanide becomes of an apple-green colour and emits an odour of hydrocyanic acid. He found no difficulty in extracting $\frac{1}{2}$ grain of saccharin from a pint of beer by evaporating it to one third its bulk and agitating with ether. The beer may be acidified with phosphoric acid (not sulphuric), but this is not necessary. The ethereal solution on evaporation yielded a residue which on ignition in presence of carbonated alkali and a little nitre was found to contain sulphate, due to the reduction of the benzoylsulphinic-imide. A blank experiment with ordinary beer yielded negative results.

MALE FERN RHIZOME.

CHEMICAL examination of the ethereal extract of the male fern rhizome has recently been made by G. Dacomo, and a fairly full account of his results will be found in the *Journal of the Chemical Society*, p. 521. The substances which he found in the alcohol were filicin or filicic acid (Trensdorff), a white waxy substance $(C_{15}H_{20}O)_n$, melting at 10° , sparingly soluble in ether and cold alcohol, but soluble in hot alcohol; glucose, tannin, and a black resin were also found, as well as a green oil and the red colouring matter (felic red). When distilled with steam the ethereal extract yields an essential oil which does not appear to pre-exist in the plant. The residue from this distillation, when extracted with ether, yields a body which crystallises from hot alcohol in plates melting at 136.5° , having the composition $C_{20}H_{34}O$. This compound has received the name of *aspidol*. It is insoluble in alkalis, easily soluble in ether, benzene, chloroform, light petroleum, and hot alcohol.

It is optically active in a 3-per-cent. chloroform solution $[\alpha]_D = -24.08$. The filtrate from this precipitate of aspidol was found to contain a yellow oil with a strong odour and acid reaction, and a beautiful green oil, which gradually became brown, and was found to possess the empirical formula $(C_{27}H_{46}O_2)_n$. A brick-red resin, butyric acid, and two other unimportant bodies were also found.

SOLUBILITY OF MORPHINE IN ALCOHOLIC FLUIDS.

MR. A. H. ALLEN throws doubt on Dieterich's statement that morphine is soluble in amyl alcohol in the proportion of 1 part in 1,300, in acetic ether 1 in 1,665, and in ordinary ether 1 in 1,250. These figures do not at all agree with ordinarily accepted statements, for they show that morphine is more soluble in ordinary ether than in acetic ether or amyl alcohol, which are solvents largely employed in preference to ether for extracting morphine from its solutions. Dieterich further states that morphine is soluble in 7,000 parts of cold methyl alcohol, and in 1,630 parts of ethyl alcohol. This great difference of solvent power suggested to Mr. Allen the possibility of using methyl alcohol in opium assay according to the process of the German Pharmacopœia, as this alteration might materially diminish the error due to solubility of morphine. But on putting the matter to test Mr. Allen found that morphine was very readily soluble in methyl alcohol, so that it would be hopeless to make the substitution suggested. Dieterich also states that morphine sulphate is "very soluble" in ether, whereas Mr. Allen finds the solubility to be 1 in 82,000, and when the ether has been previously washed free from traces of alcohol, and then dehydrated by means of potassium carbonate followed by distillation, the solubility of morphine sulphate is almost infinitesimal. Thus the residue of morphine sulphate from 50 c.c. of dry ether free from alcohol was only 0.0002 gramme, corresponding to a solubility of 1 gramme of the salt in 162,000 grammes, or 225,000 c.c.

MEDICINAL TERPENE DERIVATIVES.

MR. J. W. BRÜHL has continued his researches on the oxygen derivatives of the terpenes and communicates a report to *Berichte*. The following notes refer to derivatives of pharmaceutical interest:—Menthol, $C_{10}H_{20}O$, is probably a derivative of menthene, with which it occurs in peppermint oil. It is levorotatory, and its molecular refraction shows that it contains no double bond, and that its oxygen is united by single affinities. It is a secondary alcohol, and on oxidation yields the dextrorotatory menthone, $C_{10}H_{18}O$, a ketone the relation of which to menthol is similar to that of camphor, $C_{15}H_{26}O$, to borneol, $C_{15}H_{26}O$. By the action of hydrogen chloride, menthol is converted into the compound $C_{10}H_{20}Cl$. This, by loss of HCl, yields hydromenthene, $C_{10}H_{18}$, from the tetrabromide of which, by the removal of 4 mol. HBr, paracymene is obtained. Menthol is probably hydroxy-hexahydroparacymene. Terpin, $C_{10}H_{20}O_2$, is an optically inactive compound formed by the action of alcoholic nitric acid on pinene. It is a saturated compound containing two hydroxyl-groups. By the action of hydrogen chloride on terpin, a compound, $C_{10}H_{20}Cl_2$, is formed, identical with the additive-product from dipentene and hydrogen chloride. Boiled with dilute mineral acids, terpin is first converted into terpineol, $C_{10}H_{18}O$, and then into dipentene. Terpineol contains one hydroxyl-group, has one double bond, and is optically active. In all probability terpin is a dihydroxy-terpineol a monohydroxy-derivative of dipentene. Camphor $C_{15}H_{26}O$, probably is also a derivative of the terpenes and paracymene, as it is easily obtained from camphene. From the molecular refraction of ethylcamphor, it is concluded that camphor contains no double bond. Borneol, the secondary alcohol derived from camphor, is also a saturated compound. From bornyl chloride, $C_{15}H_{27}Cl$, by elimination of HCl, camphene is obtained, so that borneol, like camphor, appears to be related to that terpene. Isomeric with camphor are myristicol and absinthol. The first of these is an alcohol, and contains two double bonds. By the action of phosphorus chloride a compound, $C_{15}H_{26}Cl$, is obtained, which on elimination of HCl yields paracymene. Myristicol is, therefore, probably a phenol of hydrated paracymene. Of absinthol, but little is known; it is neither an aldehyde nor a ketone, but the oxygen is probably combined as in cineole.—*Jour. Chem. Soc.*

NEW ZEALAND TARIFF.

THE new Tariff Bill has been adopted by the New Zealand legislature with some slight modifications, the details of which have not yet reached this country. The following are the items which the Government proposed, as far as they relate to druggists' goods, according to the latest revision. It will be seen that the tendency is decidedly Protectionist. The Government, too, is much in want of additional revenue.

	New Duty	Present Duty
	£ s. d.	£ s. d.
Aerated and mineral waters	20 p.c. ad val.	Free
Bitters, cordials, and liqueurs, the gallon	0 15 0	0 14 6
Spirits and strong waters of every kind, of any strength not exceeding the strength of proof by Sykes' hydrometer, and so on in proportion for any greater strength than the strength of proof of such hydrometer (provided, however, that until November 30, 1888, an allowance shall be made for any less strength than the strength of proof as aforesaid), the gallon	0 15 0	0 14 6
Spirits and strong waters mixed with any ingredient in any proportion exceeding 33 per cent. of proof spirit, and although thereby coming under the designation of patent or proprietary medicines, or under any other designation, the gallon	0 15 0	0 14 6
Spirits and strong waters sweetened or mixed so that the degree of strength cannot be ascertained as aforesaid when not exceeding the strength of proof, the gallon	0 15 0	0 14 6
Methylated spirits, the gallon	0 1 0	Free
Spirits in cases shall be charged as follows, on and after December 1, 1888, namely, 2 gallons and under as 2 gallons; over 2 gallons and not exceeding 3 as 3 gallons; over 3 gallons and not exceeding 4 as 4 gallons, and so on for any greater quantity contained in any case.		
Lime and lemon juice, sweetened or aerated	20 p.c. ad val.	15 p.c.
Syrups	" "	"
Confectionery, not otherwise enumerated, per lb.	0 0 2	15 p.c. ad val.
Curry powder and paste	20 p.c. ad val.	15 p.c.
Glucose, per lb.	0 0 1	0 0 0½
Jams, jellies, marmalade, and preserves, per lb.	0 0 2	0 0 1½
Meats, potted or preserved	20 p.c. ad val.	15 p.c.
Milk, preserved	" "	"
Mustard, the lb.	0 0 2	0 0 1
Pepper and pimento, unground	0 0 2	0 0 1
Pickles, the dozen pints or reputed pints, and in the same proportion for large or smaller sizes	0 2 0	0 0 9
Provisions, preserved, not otherwise enumerated	20 p.c. ad val.	Free
Raspberry vinegar	" "	15 p.c.
Rice and rice flour, the 100 lbs.	0 6 0	½ d. per lb.
Rice, nudressed and dressed, in bond, the 100 lb.	0 4 0	—
Rice, manufactured into starch, in bond, the 100 lb.	0 2 0	—
Salt, except rock, the ton	1 0 0	Free
Sauces	20 p.c. ad val.	2s. per doz. pts.
Opium, per lb.	2 0 0	1 0 0
Furniture, knife and plate powder and polish	15 p.c. ad val.	Free
Glue and size, per lb.	0 0 1½	"
Olive oil, in bulk, the gallon	0 0 6	"
Paints and colours mixed ready for use, the cwt.	0 4 0	0 2 0
Paints and colours ground in oil, the cwt.	0 2 0	Free
Soap, common, per cwt.	0 5 0	0 3 6
Soap powder, extract of soap, dry soap, and soft soap	20 p.c. ad val.	15 p.c.
Stearine per lb.	0 0 1½	0 0 1
Starch, per lb.	0 0 2	3s. per cwt.
Vanilla, per gallon	0 1 6	0 0 6
Washing powder	20 p.c. ad val.	15 p.c.
Wax, paraffin, mineral, vegetable, and Japanese, per lb.	0 0 1	0 0 1
Hair brushes and combs	20 p.c. ad val.	15 p.c.
Oil, perfumed	25 p.c. ad val.	"
Filters	20 p.c. ad val.	Free
Fish paste	" "	15 p.c.
Acetic acid, per lb.	0 0 3	0 0 0½
Cod liver oil, refined	15 p.c. ad val.	Free

	New Duty	Present Duty
	£ s. d.	£ s. d.
Glycerine, refined	15 p.c. ad val.	Free
Patent and proprietary medicines, and medicinal and other preparations or compounds not otherwise enumerated, recommended to the public under any general name or title as specifics for any disease or affection whatever affecting the human or animal bodies	25 p.c. ad val.	Free
Pearl ash, potash, and caustic potash	15 p.c. ad val.	15 p.c.
Potash	—	Free
Sarsaparilla	25 p.c. ad val.	14s. 6d. per gal.
Soda ash, the cwt.	0 1 0	Free
Soda, carbonate, the cwt.	0 1 0	0 2 0
Ink, writing	20 p.c. ad val.	15 p.c.
Pictorial calendars, show cards, and other pictorial lithographs and prints, on and after December 1, 1888	25 p.c. ad val.	Free
Photographic chemicals	15 p.c.	"
Photographic goods not otherwise enumerated	20 p.c.	"

Among the goods placed on the free list, we find the following only which can be classed as druggists' goods:—Cochineal and linen dye stuffs and dyeing materials, gum arabic and tragacanth gum, photographic cameras, shale, waste, or unrefined mineral oil, and strychnine. It is, moreover, a part of the bill that on all goods, wares, and merchandise imported into the colony there shall be levied and paid at the time of making import entry therefor a primage duty of 1% per centum on the fair market value thereof in the country whence the same were exported, as such value is defined in the Customs Laws Consolidation Act, 1882.

THE AUTOMATIC DOCTOR.

THE latest American novelty, says *Punch*—and there our comic friend is a little out—is an automatic machine at railway stations which delivers medicines instead of matches or sweetmeats. Hence the following lines:—

Note the ailment that you've got,
Cardiac or else hepatic.
Put a penny in the slot,
Lo! the action's automatic.
Out there comes for every ill,
Physic, funniest of notions,
Here a powder, there a pill,
But it draws the line at lotions.

Should a maiden chance to feel
That her frame needs restoration,
There's a section labelled "Steel,"
Which requires no explanation.
Here the Iron Doctor Stands,
For the few or for the many;
Curing with his liberal hands,
All diseases—for a penny.

Yonder gentleman a drug
Seeks, we'll say, for torpid liver;
There the pills are lying snug,
This machine's a liberal giver.
There's no need for guinea fees,
Or for any drug concoctor;
Just a penny gives you ease
From the Automatic Doctor!

MODERN DENTISTRY.—Mistress: "Well, Bridget, did you see the dentist?"

Biddy O'Galway: "Yis, ma'am."

Mistress: "Did he pull your tooth?"

Biddy O'Galway: "Sure, ma'am, he didn't lay a han't to it to pull at all. He scooped 'it out with a wee hoe, an' thin he druv it in to stay foriver—wid a plug on the top o' it to kape it tight. I'll niver be caught doin' the likes ag'in, ma'am. What with his upsettin' the sate he put me in, an' tyin' a dirty bit av an old gum shoe in me mouth fer a bib, an' makin' a noise the size o' a coffee-mill in my head, I'd laver walk the flure an' scrame."—*Puck*.

Foreign and Colonial.

THE PHARMACEUTICAL SOCIETY OF AUSTRIA.—The annual meeting of the Austrian Pharmaceutical Society will be held on October 1 and 2 at Brünn, the capital of Moravia. A larger attendance than at any preceding congress is expected, partly because of the revived interest which has of late been taken in the society by members of the craft, and also because several important matters, such as the abolition of the State concessions and the reduction of the right of dispensing by veterinary surgeons, will be discussed.

In 1864 a company was formed in Milan (Italy) under the name "Società Farmaceutica," and with a capital of 300,000 lire (12,000*l.*), for the purpose of rendering pharmacists independent of the wholesale druggists in their purchase—large wholesale co-operative concern, in fact. At first the company appears to have been fairly successful, but of late the reverse has been the case, and for several years the shareholders have not received any dividends whatever. Now the business has been offered for sale to the highest bidder with the result that it has been acquired by two firms of wholesale druggists, Messrs. Deponti, Dugnani & Co. and Manzoni & Co., who are to pay the shareholders 47 per cent. on the nominal value of their shares. The Fabbrica Lombarda di Prodotti Chimici is said to have offered first 45 and afterwards 4 per cent.

A WRITER in the *Revue Internationale*, a publication devoted to the suppression of the trade in adulterated articles of food, medicine, &c., proposes the establishment of international unions having for their object the sale of adulterated food. These unions are to employ competent chemists, who shall have charge of the examination of all kinds of produce prior to its being offered for sale, especially these articles that are intended for export. If such unions existed in all countries, and if they could come to an understanding exclusively to buy from each other, the public would have a thorough and reliable guarantee, and the writer is sanguine enough to think that if such unions were established chemists all over the world would lend their aid to carry out the object of protecting human life against impostors and the frightful results which their manipulations produce on public health.

THE AMERICAN TARIFF BILL.—It is stated that a committee of the American Senate are now engaged in the elaboration of a rival tariff measure to the Mills Bill, which has been sent up to the Senate from the House of Representatives. The Senatorial Bill—which, it is said, will serve as a platform for the Republican party at the approaching presidential elections—is framed on the basis of reducing the revenue by the simple process of raising duties to such an extent that nearly all imports will cease. The free list will be further extended (indeed, if the scheme is successful it should be reduced), and the decrease in the imports consequent upon the raising of the duties to a prohibitory height is expected to amount to \$70,000,000 per annum. The Bill also provides for the total abolition of the internal revenue tax on tobacco and on spirits used in the arts and mechanical purposes.

BULGARIAN OTTO OF ROSE.—A correspondent writes:—"Against the general expectation, the yield of otto of rose in Bulgaria has been a very good one this season, amounting to about 85,000 oz. The weather during the distilling period (July 22 to June 20) and that which immediately preceded it was so favourable that an average weight of 9 okka of flowers sufficed to yield one miscal (nearly 5 grammes) of oil, while as a rule 12 okka of flowers are required to produce the quantity. Prices are rather lower than last season, partly because of the heavy old stock which is still held by the principal dealers, and also because the export outlook is very unfavourable. Turkey, the principal buyer, having now put a customs duty of 8 per cent. *ad valorem* on otto of rose, which was formerly admitted duty free. Moreover, the Bulgarian and East-Roumelian emigrants, who have settled in the Turkish vilazets of Adrianople and Broussa have founded rose plantations there, which already commence to compete severely with those in Bulgaria."

At the free pharmacies in the Russian Empire an aggregate number of 12,374,354 prescriptions was dispensed last year.

OIL OF PETIT-GRAIN FROM PARAGUAY.—Essential oil of orange leaves (petit-grain) is at present the principal export article from Paraguay. Continental perfumers have discovered that it is cheaper to import orange-leaf essence from South America than to give three times the price for the French product. The manufacture in Paraguay increases every year, and as Paraguay is covered with forests full of bitter oranges, there is some fear that it will soon swamp altogether the markets of the world with this essence.

THE TARIFF REVISION BILL, as accepted by the U.S. House of Representatives, places on the free list the following articles of pharmaceutical interest:—Beeswax; glycerine, crude, brown or yellow, of 125 s.g. or less at a temperature of 60° F., not purified by refining or distilling; phosphorus; soap stocks, fit only for use as such; soap, hard and soft, not specially enumerated; sheep dip; extracts of hemlock and other tanning barks; indigo (extracts of, and carmined); iodine (resublimed); oils of croton, hempseed, rapeseed, and cottonseed; petroleum; alumina, alum, patent alum, alum substitute, sulphate of alumina and aluminous cake and alum in crystals or ground; all imitations of natural mineral waters and all artificial mineral waters; baryta (sulphate of); boracic acid (crude), borate of lime, and crude borax; sulphates of copper and iron; potash, crude, carbonate, or fused, and caustic potash; chlorate, nitrate, and sulphate of potash; sulphate of soda, crude or refined, and Glauber's salt; sulphur, refined, in rolls; wood tar; coal tar (crude); aniline oil and its homologues; coal-tar products; alizarine and other colours of anthracene; all preparations of coal tar, not colours or dyes, and not acids of colours and dyes; dye-wood extracts; spirits of turpentine; ochre, umber, and senna earths; whale, seal, salad, olive, and neatsfoot oils. All barks, beans, berries, balsams, buds, bulbs, bulbous roots and excrescences, such as nutgalls, fruits, flowers, dried fibres, grains, gums and gum resins, herbs, leaves, lichens, mosses, nuts, roots and stems, vegetables, seeds and seeds of morbid growth, weeds, woods used expressly for dyeing, and dried insects, any of the foregoing which are not edible and not specially enumerated or provided for; opium, crude, containing 9 per cent. and over of morphia, for medicinal purposes; antimony (regulus or metal); quicksilver; hemp, rape, and other oil seeds.

CINCHONA CULTIVATION IN THE SANDWICH ISLANDS.—Mr. J. W. Forsyth, an American specialist, who, at the invitation of the Minister of the Interior of the Sandwich Islands, investigated the suitability of that country for cinchona cultivation, thinks favourably of the chances of such an industry. Already two trials have been made to grow cinchona in the islands, and the results, Mr. Forsyth thinks, are decidedly encouraging. The first was on the property of Mr. James I. Dowsett, of Ulupalakua, Maui, where a few trees were planted some twelve years ago by the late Captain Makee. In the spring of 1887 Mr. Forsyth saw these trees, one of which, a *Cinchona robusta*, was cut down, and the bark, weighing 23 lbs., brought to Honolulu for analysis. The three samples were found to contain from 12.180 to 12.643 per cent. of total alkaloids, and from 5.584 to 5.632 per cent. of quinine sulphate. The next trial was made by Mr. Purvis, of Kukuiahae. This gentleman made a special visit to Ceylon for the purpose of gathering information about the cultivation of this valuable product. He spent three months there, returned with seeds of the choicest kinds, and planted a small block of land at an elevation of about 2,000 feet above sea level, some twelve acres in extent. His exertions were rewarded with success, and he now has about 12,000 trees close upon three years of age. In October, 1887, these trees were in a very healthy and thriving condition. The foliage is of a deep green colour, and altogether shows evidence of thriving vigorously. In cinchona cultivation the great difficulty experienced is to raise the seed to plant from; after that the rest of the work is comparatively easy. Mr. Forsyth is of opinion that the whole of Hamakua and Hilo, of the island of Hawaii, and also the districts as corresponding to them in soil-formation on the island of Maui, are eminently adapted for the cultivation of cinchona. The varieties most likely to succeed in the Sandwich Islands are the *Ledgeriana* and *Calisaya* type.

Medical Cleanings.

TREATMENT OF WHOOPING-COUGH.

M. D'HEILLY treats this affection by means of a compound powder, composed of salicylate of bismuth, 5 grammes; powdered benzoïn, 5 grammes; sulphate of quinine, 1 gramme; to be used as an insufflation five times a day. Michael employs powder of benzoïn and quinine; Guerder, a mixture of boric acid and powdered coffee; Carlaz, sub-nitrate of bismuth and powdered benzoïn. In the early stages, the mixture of 1 part each of quinine and bromide of potassium with 2 parts of starch is useful.

COCOANUT AS A VERMIFUGE.

PROFESSOR PARISI, of Athens, when he was in Abyssinia happened to discover that ordinary cocoanut possesses vermifuge qualities in a high degree. He took one day a quantity of the juice and pulp, and shortly afterwards felt some amount of gastric disturbance, which, however, passed off in a few hours. Subsequently he had diarrhoea, and was surprised to find in the motion a complete tenia, head and all, quite dead. After returning to Athens Professor Parisi was successful in treating a number of patients by the same remedy. He orders the milk and the pulp of one cocoanut to be taken early in the morning fasting, no purgative or confinement to the house being required. He suggests that pharmacists should make cocoanut preparations which may answer the same purpose, and perhaps may prove rather more convenient.

FLUO-SILICATE OF SODIUM.

AN investigation by Dr. Conrad Berens, of Philadelphia, shows (*Therap. Gaz.*) that the solution of fluo-silicate of sodium is extremely useful in various forms of conjunctivitis, especially in those cases in which the discharge was of a purulent character, these generally yielding to three or four days' treatment with a 1-per-mille solution. Several cases of suppurative affections of the ears were also successfully combated, as well as nasal and throat affections in which there was offensive discharge. A solution of the fluo-silicate, $\frac{1}{2}$ drachm to 1 pint, was used as an injection in four cases of leucorrhœa, and it caused the discharge to cease in from four to ten days. The writer concludes that the salt is more efficient than either bichloride of mercury or carbolic acid in preventing decomposition; that it is extremely efficient in inflammatory conditions of the mucous membranes; and that in conditions associated with the production of pus and the results of fermentative processes fluo-silicate of sodium acts with prompt and harmless efficiency.

RICKETS AND INFANTS' FOOD.

At the Medical Association meeting at Glasgow, Dr. W. B. Cheadle (London) introduced a discussion on rickets. The chief factor in the disease, he considered, was defective nourishment, and he advocated as a remedy food rather than drugs. The food must have fat and proteids and phosphate of lime, these agents to be combined with fresh and other favourable hygienic conditions. Professor Ranke (Munich) expressed concurrence in the president's views as to the etiology of rickets. Dr. Jacobi (New York) believed positively that there was no greater enemy to children's health and no greater cause of rickets than cow's milk given as regular food and without correction. Cow's milk was different from that of women in many respects, and unless there was added to it some farinaceous food like oatmeal or barley it would result in the production of gastric acids. He advocated the use of phosphorus in rickets, only it must not be given in the shape of salts.

INHALATIONS IN THE TREATMENT OF LUNG DISEASE.

At the Glasgow meeting of the British Medical Association, Dr. C. T. Williams read a paper on this subject, and from his own experience submitted the following conclusions:—(1) That the success of inhalations as a mode of medication depends principally on the easy convertibility into gas or vapour of such substances as are clearly desirable

for the purpose. (2) That, consequently, bodies which are volatilised at ordinary temperatures are more readily absorbed by the lungs than bodies which have to undergo combustion before conversion into gases. (3) That all moist inhalations where steam, watery vapour, or spray is the vehicle of medication are but slowly absorbed by the lungs and enter the circulation in small quantities, and in some cases not at all. (4) That medicinal inhalations are more useful in diseased conditions of the pharynx, larynx, and larger bronchia than in those of the alveoli and lung parenchyma; and (5) that in pulmonary disease the antiseptic respirators, while they lessen cough and reduce expectoration, exercise no lasting remedial influence on the diseased conditions of the lungs, and often seriously interfere with the freedom of respiratory effort so desirable in the treatment of such affections.

TREATMENT OF POISONING BY ACONITE AND BELLADONNA.

MR. HUGH R. JONES, M.B., of Llanwyddon, reports in the *Lancet* a case of an old lady, 75 years of age, who had swallowed by mistake a large tablespoonful of a mixture of equal parts of aconite and belladonna liniments. She vomited almost immediately, and an emetic of salt-and-water was administered by her friends. On his arrival at 10 P.M. (three-quarters of an hour after the liniment had been swallowed), she was retching and vomiting, and complaining of a curious sensation in her throat and of tightness across her chest, which prevented her lying down. Pulse 98, slightly irregular, small and weak; pupils equal, not dilated. The treatment adopted was to wash the stomach out with warm water and give her 2 drachms of brandy at once, and afterwards the white of an egg beaten up with 2 drachms of brandy and half an ounce of water every hour, in small quantities at a time. This appeared to relieve the vomiting, but the pulse grew weaker, and an attack of faintness came on at 10.30 P.M. Respiration ceased, and the patient became quite rigid. This attack was relieved by 10 minims of brandy given hypodermically. The pulse improved slightly, but gradually failed again, until at 10.50 P.M. she had a second attack, which was relieved in the same way. From this time there was a gradual though tardy improvement, which resulted in a cure. The symptoms seem to have been almost entirely due to aconite, the delirium alone being possibly assignable to belladonna.

PHENACETIN.

A PAPER by Dr. Dujardin-Beaumez on phenacetin was read in the pharmacological section of the British Medical Association at Glasgow. The author pointed out that there are three phenacetines (or acetphenetidines)—the meta-, para-, and ortho-acetphenetidine. The first possesses no therapeutic properties, while the second is more powerful and satisfactory than the third. The insolubility of the agent was found to hinder its subcutaneous administration, and rendered experimentation on animals difficult. It appears, however, that if phenacetin is toxic at all, it must be so in but a very slight degree. Therapeutically the phenacetines have a double action. They lower temperature (especially in pyrexia) and soothe pain. In fever half a gramme lowers the temperature from 1° to 2° C., the effect lasting usually about four hours, though sometimes longer. Abundant sweating is produced, and often a sensation of collapse. Phenacetin in fevers shows itself superior to antipyrin and acetanilide in producing marked antithermic effects without toxic phenomena. But it is as an analgesic that the drug outrivals these its predecessors; while it is in this respect quite as powerful as antipyrin or acetanilide, it does not cause the pain in the stomach or the scarlatiniform rash of the former, nor does it give rise to the cyanosis of the latter. He had given it for months in daily quantities of from 1 to 2 grammes, and had never observed any bad effect. He had used it for the relief of every form of pain (neuralgias, migraine, rheumatic pains, muscular rheumatism, acute articular rheumatism, the lightning pains of tabes, &c.), and always with the best results. In hysteria and hysterical pains it answers better than bromides, and it procures sleep in nervous insomnia. Phenacetin is to be regarded as a narcotic as well as an analgesic, a depressor of the excitability of the medulla. The dose of phenacetin (the para-acetphenetidine) is 1 to 2 grammes daily, given in single doses of $\frac{1}{2}$ to 1 gramme. It is best given in *sachets*.

USEFUL RECIPES FROM THE "NATIONAL FORMULARY."

(Continued from page 192)

Mucilago Dextrini—Mucilage of Dextrin.

	Parts
Dextrin	1
Water, enough to make	3

Mix them in a tared vessel, and heat the mixture, under constant stirring, to near boiling, until the dextrin is dissolved and a limpid liquid results. Then restore any loss of water by evaporation, strain the liquid through muslin and allow it to cool short of gelatinising, when it will be ready for immediate use.

Note.—If the mucilage is not at once to be used for preparing emulsions or other mixtures transfer it, while hot, to bottles, which should be filled to the neck. Then pour into each bottle a sufficient quantity of olive oil to form a protecting layer, and when the mucilage has gelatinised securely cork the bottles and keep them in a cool place, in an upright position.

When gelatinised mucilage of dextrin is to be used for the preparation of emulsions or for other mixtures pour off the protecting layer of oil from the surface, remove the remainder of the oil by a pellet of absorbent cotton and warm the bottle gently until the mucilage is liquefied. Then allow it to cool short of gelatinising.

The kind of dextrin suitable for this preparation is the commercial amylose variety, provided it still contains some unaltered or only partially altered starch, and forms a jelly on cooling when made into a mucilage after the formula above given. The yellow variety, which is completely soluble in about 2 parts of cold water, will not answer the purpose.

OLEUM CARBOLATUM—CARBOLISED OIL.

	Parts
Carbolic acid	5
Cotton-seed oil	95

Melt the carbolic acid with a gentle heat, and mix it with the cotton-seed oil.

PILULÆ AD PRANDIUM—DINNER PILLS.*Cole's Dinner Pill.*

	Each pill contains
Aloes	1½ grains
Mass of mercury	1½ "
Jalap, in fine powder	1½ "
Tartrate of antimony and potassium	30 "

Hall's Dinner Pill.

	Each pill contains
Aloes	1 grain
Extract of glycyrrhiza	1 "
Soap, in powder	1 "
Molasses	1 "

PILULÆ ANTIDYSEPTICÆ—ANTIDYSEPTIC PILLS.

	Each pill contains
Strychnine, alkaloid	¼ grain
Ipecac, in fine powder	15 "
Alcoholic extract of belladonna	15 "
Mass of mercury	2 grains
Compound extract of colocynth	2 "

PILULÆ LAXATIVÆ POST PARTUM—LAXATIVE PILLS AFTER CONFINEMENT—BARKER'S POST PARTUM PILLS.

	Each pill contains
Compound extract of colocynth	1½ grains
Aloes	¼ grain
Extract of nux vomica	15 "
Resin of podophyllum	15 "
Ipecac, in fine powder	15 "
Extract of hyoscyamus	15 "

Note.—This is the formula generally employed by Dr. Forlyce Barker except where special circumstances render modifications necessary. The form usually quoted in manufacturers' lists and some formularies is not correct.

PILULÆ ANTINEURALGICÆ—ANTINEURALGIC PILLS—GROSS' ANTINEURALGIC PILLS.

	Each pill contains
Sulphate of quinine	2 grains
Sulphate of morphine	15 grain
Strychnine, alkaloid	50 "
Arsenious acid	15 "
Extract of aconite leaves (U. S. P. 1870)	15 "

Note.—When "Antineuralgic Pills," or "Neuralgia Pills," without other specification, are prescribed, it is recommended that the above preparation be dispensed. Sometimes the sulphate of morphine is directed to be omitted.

PILULÆ CATHARTICÆ VEGETABILES—VEGETABLE CATHARTIC PILLS—"IMPROVED" VEGETABLE CATHARTIC PILLS.

	Each pill contains
Compound extract of colocynth	1 grain
Resin of podophyllum	1 "
Extract of leptandra	1 "
Abstract of jalap, in fine powder	1 "
Extract of hyoscyamus	1 "
Extract of gentian	1 "
Oil of peppermint	¼ minims

Note.—Extract of leptandra (U. S. P.) is preferable to the so-called leptandrin, or resin of leptandra, as this is of very uncertain and varying composition.

PULVIS TALCI SALICYLICUS—SALICYLATED POWDER OF TALCUM.

	Parts
Salicylic acid	3
Boric acid, in fine powder	10
Talcum, in fine powder	87

Mix them intimately.

Note.—The corresponding preparation of the Germ. Pharm. has the title "Pulvis Salicylicus cum Talco," and contains 10 parts of wheat starch in place of boric acid.

SPONGIA DECOLORATA—DECOLORISED SPONGE—BLEACHED SPONGE.

Sponge,
Permanganate of potassium,
Hyposulphite of sodium,
Hydrochloric acid,
Water, each a sufficient quantity.

Free the sponge from sand and any other obvious impurities or damaged portions by beating, washing, and trimming, then soak it for about fifteen minutes in a sufficient quantity of solution of permanganate of potassium, containing one hundred and twenty (120) grains to the pint, wringing the sponge out occasionally and replacing it in the liquid. Then remove it and wash it with water until the latter runs off colourless. Wring out the water, and then place the sponge into a solution of hyposulphite of sodium containing one (1) troy ounce to the pint. Next add for every pint of the last-named solution used, one (1) fluid ounce of hydrochloric acid diluted with four (4) fluid ounces of water. Macerate the sponge in the liquid for about fifteen minutes, expressing it frequently and replacing it in the liquid. Then remove it, wash it thoroughly with water and dry it. In the case of large and dark-coloured sponges this treatment may be repeated until the colour has been removed as far as possible.

Note.—If it is desired to keep the sponge soft and to prevent it from shrinking when dry, it may be dipped, after having been finally washed, into a mixture of 1 volume of glycerin and 5 volumes of water, after which it is to be wrung out and allowed to dry.

SUCCUS LIMONIS CUM PEPSINO—LIME JUICE AND PEPSIN.

Pepsin (N. F.)	256 grains
Water	3 fluid ounces
Glycerin	3 "
Alcohol	15 "
Purified talcum	120 grains
Lime juice, enough to make	16 fluid ounces

Dissolve the pepsin in the water, mix with about eight (8) fluid ounces of lime juice. Then add the glycerin and alcohol, and lastly, enough lime juice to make sixteen (16) fluid ounces. Incorporate the purified talcum with the liquid, let it stand a few days in a cold place, if convenient, occasionally agitating, then filter it through a wetted filter, and finally pass enough lime juice through the filter to restore the original volume.

Each fluid drachm represents 2 grains of pepsin (N. F.).

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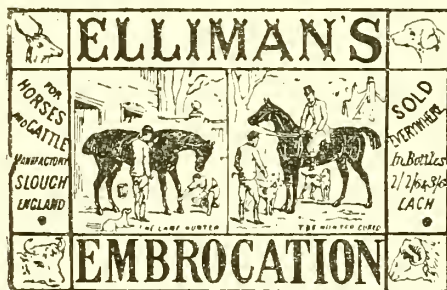
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See Advertisement, page 65 (bottom folio).

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EDITORIAL NOTES.

PRESCRIPTIONS.

No part of the pharmacist's work interests him so much as that which is carried on in the "dispensing department"; it is the function for which he is specially trained and which constitutes the peculiar characteristic of his business. In all European countries except this one, and in a part of the United Kingdom too, the dispensing of physicians' prescriptions is a duty reserved by law to the trained pharmacist; and in most States the principle is recognised that for the public safety it is particularly desirable that, whoever prepares medicines, the prescriber himself should not be permitted to do so. Society seems to have more or less demanded in all ages the separation of the practitioners of medicine and pharmacy; and it would appear, as well as we can ascertain from the scanty records available, that it has been the practitioners themselves, and perhaps especially the practitioners of the latter art, who have perpetually tended towards combination of functions. Jesus the son of Syrach, who wrote at least 2,000 years ago, seems to have had clearly in his mind two distinct personages when he wrote in the book of Ecclesiasticus, "Honour the physician with the honour due unto him, for the uses you may have of him, for the Lord hath created him. . . . The skill of the physician shall lift up his head; and in the sight of great men he shall be in admiration. The Lord hath created medicines out of the

earth; and he that is wise will not abhor them. . . . With such doth he heal men and taketh away their pains. Of such both the apothecary make a confection." Fosbrooke tells us that "among the Greeks and Romans, though the physicians also were collectors and dealers in herbs and medicines, yet the *apothecarii* were confectioners;" that is compounders.

But we have no space here to deal exhaustively with the relations existing between physicians and apothecaries. It may be said that in all ages and in all civilised countries the two professions have existed side by side, more or less distinct, always associated and very often quarrelling over their respective rights to the sick man and his fees. What we are particularly interested in just now is the history of the prescription as we know it.

Dr. Otto A. Wall, Professor of Materia Medica in the College of Pharmacy, and of Pharmacy in the College of Medicine at St. Louis, has lately written a book entitled "The Prescription, therapeutically, pharmaceutically, and grammatically considered." In the course of his work Dr. Wall gives us some interesting notes on the history of the signs used in prescriptions, but of the history of the prescription itself we are sorry to find he tells us nothing. The immensely successful business of writing out in more or less unintelligible characters prescriptions for the public is, no doubt, a modern development. We doubt if it dates back much over a century. There is, of course, plenty of evidence that physicians wrote prescriptions and that apothecaries dispensed them centuries ago; but it would seem as if the apothecary worked in such cases generally as the assistant of the physician. From the records of the Great Plague it appears that the apothecaries were in the habit of frequently accompanying the physicians in their visits. On those occasions they, no doubt, took down their instructions, and afterwards sent some the medicines. But in the middle of the last century the fashion, in London at least, seems to have been for the physicians (exclusive of the few who had special appointments to royal and noble families) to occupy themselves with consultation, not with the public, but with the apothecaries, who did the visiting themselves. For this purpose they attended at the coffee-houses of the day, and there received their apothecary clients and wrote out prescriptions at half-pence fees. One of them (Sir Richard Blackmore), himself one of the physicians to William III., in answer to some literary criticisms on one of his works, says: "I am only a hard-worked doctor, spending my days in coffee-houses, receiving apothecaries, or driving over the stones in my marriage visiting patients." Of course, as this shows, they had no little public *clientèle* of their own to depend upon as well as the crumbs which the apothecaries themselves threw to them; but that the latter had managed to pretty well monopolise medical practice is shown by the fact that in 1795 there were in London about 100 physicians and 2000 apothecaries. A familiar verse of Pope's testifies to the low position of the apothecaries in his time (about 1711) and records the manner in which it was won:

So modern 'pothecaries, taught the art
By doctors' bills to play the doctor's part,
Bold in the practice of mistaken rules,
Prescribe, apply, and call their masters fools.

The "doctors' bills" is the interesting point of that line from our present point of view; but, as we have said, these could seem to have been the instructions given from the doctor to the apothecary direct, and not prescriptions, such as we understand them, given to the public. Sir Thomas More (1529), in his "Comfort against Tribulation," speaks of the "billes made by the greaite physician God, prescribynge the medicines hymselfe"; and there is a curious line written by an Elizabethan writer, Warner, in 1602, directly to the

point, saying, "Physitians bylles not Patients, but Apothecaries know."

The outgrowth of prescriptions given, or rather sold, by physicians to the public was probably a result of the extraordinary success of the apothecaries in their contest with the former. Not that in olden times physicians ever refused, as barristers do now, to receive and consult with lay visitors; but this would seem to have become a generally recognised branch of medical practice only about the beginning of the present century. The prescription then became a solemn affair. Students were taught, and for that matter are taught still, that it should consist of the "basis," the "adjuvans," the "corrigens," the "constituens," and the "dirigens"; signs were made use of, Latin was invariably employed, and bad writing was no doubt cultivated expressly with the intention of promoting the air of mystery about the document which gave it a factitious value. "Minus credunt quæ ad suam salutem pertinent, si intelligunt," said Pliny; and this maxim was most religiously adopted by most prescribers.


The apothecaries' signs, the Latin language, and the general form of prescriptions no doubt descended direct from the "bills" which doctors passed to their apothecaries; but if that be so we very much doubt whether there is any good foundation for the ingenious notion, originated, we believe, by Dr. Paris, that the "R" of the prescription was directly traceable to the sign of the planet Jupiter. No doubt the old herbalists were fond of employing this and other planetary signs in their semi-astrological writings, but we discern very little connection between their works and the "bills" which the doctors scribbled and handed to their associates or servants. It seems rather too absurd to believe that the oracles, however much they may have acted before the public, should have kept up the performance of invoking Jove on such informal scraps as would have been their communications the one to the other. On the other hand, the writing being always in Latin, nothing is more natural than that the usual first word should have been "Recipe" and that this in the hurry of the work should have been abbreviated to its first letter. The existence of the word "Recipe," in our language as applied to a formula is corroborative of this view.

In the work already alluded to Dr. Wall traces the history of the apothecaries' signs and names for weights and measures, and as these may not be generally known, we give here the substance of Dr. Wall's opinions and researches:—

"Grain" (gr.) was based on the weight of a grain of wheat, of which it was ordained by Henry III. in 1266 that 32 grains of wheat taken from the middle of the ear and well dried should weigh one pennyweight, or the twentieth part of an ounce. Twelve such ounces made the pound, and therefore the troy pound at that time weighed 7,680 grains, but as the pennyweight was afterwards reduced to 24 grains, the pound became likewise reduced to 5,760 grains.

Scruple (♄) is from *scrupulum*, *scrupus*, *scrupulus*, *scriptulus*, or *scriptum*, *scriptulum*, *scriptulum*, which was the lowest unit of weight among the ancient Romans. It is said to have originally meant a small stone or pebble, such as might find its way between the sandal and the foot. Hence the use of the term as signifying a small objection or difficulty. Among the ancient Chaldees the scruple was a measure of time which first meant the $\frac{1}{1080}$ th of an hour, but later became the $\frac{1}{60}$ th of an hour, equivalent to our minute. This was itself divided into "second scruples," from which our term seconds is derived. Dr. Charles Rice has investigated the origin of the sign employed to represent a scruple, and says it is derived from the Greek *gamma*, the first letter of the word *gramma*, now the *gramme*, and the Greek

equivalent of the Latin *scrupulum*. The similarity of the

written gamma  when compared with the scruple sign

as sometimes written  Dr. Rice says is apparent.

Another explanation assumes the sign to be simply a slurred s, as the initial of the Latin *scrupulum*, when written, thus:



Dr. Wall says a similar sign has been found on a bronze celt among the relics of ancient Rome,






and another in an alphabet used in the inscriptions of the prehistoric American mound-

builders .

The *drachma* was a Greek silver coin worth about ninepence, which was also used as a weight. The name was derived from *drachme*, a handful, a *drachma* representing six iron *oboli*, which formed a small handful. The probable origin of the sign ξ is that it was derived from the Egyptian sign for half, which closely resembled our 3. The Egyptian weight unit was equal to 2 drachmas, so that half the Egyptian unit represented the Greek drachm.

The ounce, or uncia, Greek *ovγία*, was the twelfth part of the *mina*, or pound, which, however, was $12\frac{1}{2}$ ounces, the extra half-ounce being added to give good measure. The sign ξ may have been simply the drachm sign with an extra hook to denote the next higher denomination of weight. Dr. Rice believes it to be the Greek ξ (x), being used as an abbreviation of the term *οὐβαφίον*, which meant a fluid ounce. Dr. Wall, however, thinks it was more likely to have been a sort of monogram of the word *ovγία*, the two g's forming a figure something like a Greek capital X, which became afterwards written with the small ξ . The "pound" is the Latin "*libre pondus*," and the sign lb. merely represents the first word of that expression. Among the Romans the pound was often

designated  also , or .

The centre figure of the first of these signs is a rude picture of a beam-balance. The second sign is unmistakably a balance, and these serve to explain the origin of the transverse stroke in lb and its near relative \mathcal{L} .

THE IMPERIAL INSTITUTE.

WE are glad to see an announcement that the organisers of the Imperial Institute are contemplating the establishment of a Commercial Intelligence Department. They are, it appears, already in correspondence with the Colonial Governments, and they propose to collect and distribute by various available channels information of an authoritative character respecting Colonial requirements and capacities, on a scale and with a completeness which cannot be said to be attained by present means. A monthly journal, special weekly circulars, and dissemination of intelligence through the commercial journals of the country are the means proposed whereby the mercantile community of Great Britain are to be made acquainted with the resources, industries and commerce, the condition and statistics of trade and of labour markets, and the general commercial relations of the several British colonies, of India, and of foreign states and colonies. Information is to be collected relating to known and new

sources of supply of raw material, mineral, vegetable, and animal, in the colonies and India, to fluctuations in prices, means and charges of transport, the opening up of new countries or districts, new markets, &c. Subsequently it is intended to provide for the collection and exhibition of samples of products for trade and experimental purposes. And with a view of getting suggestions and opinions it is announced that a conference will shortly take place between the organising committee of the Imperial Institute and representatives of the principal chambers of commerce and trade associations.

These indications of activity are satisfactory, and it is certain that if kept well up to its work by those interested the permanent establishment in our midst of a body whose express business it will be to promote relations between the mother country and the British colonies and possessions abroad, will be of social, political, and financial benefit to all the parts of the great British Empire.

The area of the British colonial empire (exclusive of India) is sixty times the area of the United Kingdom, and the total population of all that vast extent of territory is at this moment as nearly as possible exactly half of the number living in the British Isles. It needs only the statement of that fact to indicate the vast possibilities in the future for the race which has taken upon itself the task of subduing and populating those lands. The colonies and India together absorb one-third of the whole of the exports from the United Kingdom, and one-fourth of the imports into the home country come from the British possessions abroad. We discover the immense importance of our colonies from a commercial point of view when we divide their purchases by their respective populations. We find that Australians (every man, woman, and child of them) buy from Great Britain 10% worth of goods per head annually. In South Africa it is 6%; in the West Indies and Canada it averages about 2% a year. The Straits Settlements and Hong-Kong buy more in proportion than Australia, but no doubt a large part of their purchases is for redistribution. By the side of these figures it appears that the inhabitants of the United States buy less than 10% worth of English goods each, annually. Uruguay and the Argentine Republic are our best foreign customers, reckoned in this manner, their purchases averaging 3.61% and 2.55% respectively. France and Germany are below the United States, and only Holland and Belgium exceed 1% per head per annum. These considerations show how true is the tradition that "trade follows the flag," and indicate, moreover, how important it is that British manufacturers and merchants should study the wants and wishes of the people in markets so favourably inclined to us, and how desirable it is that trade between the various parts of the British Empire should be cultivated and facilitated by all rational means.

THE NEW SIBERIAN TRADE ROUTE.

THE discovery, or rather the re-opening, by Captain Wiggins, of Newcastle-on-Tyne, of the trade route to North-Western Siberia, *via* the North Cape and the Kara Straits, has caused general attention to be drawn to that part of Asiatic Russia as a new market for British goods. Although the occurrence is not unusual, we may congratulate ourselves upon having been five months ahead of all our contemporaries in giving particulars of the undertaking of the "Phoenix Adventurers." In our issue of March 17 last we enumerated the advantages which British druggists might reap from cultivating business relations with Siberia. There is no doubt that, apart from pharmaceutical preparations, some of the heavy chemicals, especially such as are employed in

mining industry, would find a ready sale in Siberia—in fact, Mr. Wiggins, in a letter which he addressed to us a short time ago, expressly mentioned such articles as likely to be among the most welcome objects of barter to the inhabitants of the Obi and Yenisei territories.

In a recent official despatch Sir R. Morier, our ambassador at St. Petersburg, recounts the history of Captain Wiggins's venture from its origin until the present time. The salient features of the story are already familiar to readers of THE CHEMIST AND DRUGGIST; but it appears that since March last the negotiations with the Russian Government have been completed, and liberal concessions (taking into account the commercial policy of the Northern Empire), granted to the English traders. Merchandise imported in vessels of the "Phoenix Adventurers" will be admitted duty free into the Obi territory for one year, and into that of the Yenisei for five years, while permission has also been provisionally given for the "Phoenix" vessel to bring the European goods from the port of Golchika, at the mouth of the Yenisei river, to the trading centre of Yeniseisk, a town nearly 2,000 miles inland, and to the Siberian products to Golchika for shipment thence to the markets of the Western world. Of the three gigantic rivers, the Obi, the Yenisei, and the Lena, which traverse Siberia from south to north, and empty their waters in the Arctic Ocean, the two former have thus been definitely opened to British trade. The Lena river, the larger and westernmost of the three, has not yet been reached; but even if trade with it should be feasible it is a matter of conjecture whether it could pay, as a large part of the Lena territory is merely an ice-bound solitude, while even in its principal city, Yakutsk, for a thousand miles from its mouth, the cold is so intense that the thermometer, in winter, does not average above -46° F. As regards the Obi, the river nearest Europe, which, with its tributaries, waters some of the richest parts of Siberia, exemption from customs duties has been allowed for one year; and in all probability, if the British venture should be very successful, the Russians will push forward to the shore of the Obi river the railway which already connects the Empire in Europe with the Ural mountains, and thus secure that trade for themselves. It is, therefore, the Yenisei territory, comprising virtually the whole of Central Siberia, with which the principal part of the Phoenix Adventurers' business will be done. The mouth of the Yenisei river is accessible by Captain Wiggins's route for about three months every year, and as with a slow vessel the voyage from Newcastle to Golchika, at the Yenisei mouth, takes only twenty-one days, there is plenty of time for trading during the ice-free period. It is proposed that the British steamers shall discharge their cargo at Golchika and there load again, as quickly as possible, with Siberian produce, while the communication between Golchika and the central market of Yeniseisk, about 2,000 miles further south, is to be kept up, at first by the "Phoenix" and subsequently by Russian vessels to be built for the purpose. Nothing can be more erroneous than the prevailing belief that Siberia is only an arctic desert. Its five million square miles of territory comprise almost every variety of soil and climate, and among its population, amounting, exclusive of Central Asia, to over five millions, European goods of nearly every description will find a ready market. Among the principal cities which are not brought into direct commercial relations with England are: On the Obi and its tributaries, Tobolsk, Omsk, Semipalatinsk, Tomsk, and Barnaul; and in the Yenisei territory, Yeniseisk, Krasnoïarsk, Irkutsk, and Kiachta, the latter a famous frontier station, through which in former times nearly all the caravan trade from China used to pass. The population of these cities ranges from 8,000 to 40,000; all of them possess a very large trade, and in the majority extensive

silver, lead, and copper smelting works, gold-washing establishments, leather, glass, woollen and soap factories are found. Barnaul has a meteorological observatory and a large geological museum; Irkutsk, with an annual trade worth very much over 1,000,000*l.*, a medical school of repute; Omsk, a large military school; and Yeniseisk, an important arsenal. The mean temperature in these cities ranges from 63° to 2° F. in January, and from 61.3° to 67.5° F. in July—their summer, though short, being thus much warmer than our own. The staple products which the Phoenix Adventurers hope to bring from Siberia are wheat, samples of which, brought to Europe by Mr. Wiggins on a former voyage, proved to be superior to even the Indian wheat, and gold. This metal is known to abound in Siberia, but has hitherto been obtained only from alluvial washings, which are a Government monopoly, the difficulty of carrying the heavy gold-mining machinery into the country having been insurmountable. Furs of all kinds, timber, and fish (for the preservation of which salt and borax can be used) are also staples. Quicksilver, copper, and antimony mines are known to exist, and will probably be developed now; while we may also expect to receive by the new route Siberian castoreum, Cabardine musk, isinglass, gum asafetida and ammoniacum, honey and wax, and a large variety of medicinal herbs, and products of the forest trees. Eventually, also, part of the Chinese trade which still goes *via* Kiachta may find its way to Great Britain. In addition to heavy chemicals and pharmaceutical articles, soap, seed oils, petroleum, and dye goods find an outlet by the new route. Should the working of the Siberian gold mines prove as successful as is anticipated, there is more than a chance that the depreciation of silver, to which in great measure the trade depression of the last few years is ascribed, may be arrested by the influx of gold from the region now again opened to commerce.

BRITISH PHARMACEUTICAL CONFERENCE.

THE arrangements for the approaching meeting at Bath advance apace, and, according to reports which we have received from various quarters, the gathering will not be the least successful of those which have been held since the Conference met in Bath four-and-twenty years ago. Mr. Hutton, the local secretary, reports that the applications for tickets and the requests for beds are numerous, and those who have not yet applied to him and who intend joining the meeting would do well to secure accommodation without delay.

The programme of solid material to be submitted to the Conference on Tuesday morning, September 4, is not so heavy as usual, but we believe that this is a matter which will not cause much regret to the readers of papers and those who discuss them, as it is hoped that there will be time for the reading and discussion of all, thus avoiding the uncereemonious and unprofitable method generally followed of rushing through half a dozen or more important papers at the end of the second day. After the address by the President, Mr. F. Baden Bengel, which we believe will be one of exceptional interest and practical importance, a number of communications will be read, amongst them being the following:—

Proximate Analysis of the Seeds of Cassia Tora. By W. Elborne, F.L.S.

Lard: Its Adulteration with Cotton-seed Oil, and Detection thereof. By M. Conroy, F.C.S.

On the Antiseptic Properties of some of the Fluorine Compounds, and on the Sodium Silico-Fluoride as an Antiseptic for Surgical and General Purposes. By W. Thomson, F.R.S.E., F.I.C.

A Few Laboratory Notes. By R. Wright.

On the Chemistry and Pharmacology of some of the Morphine Derivatives. By D. B. Dott, F.R.S.E., and Ralph Stockman, M.D.

Oil of Cajuput. By W. West, F.L.S.

Vinum Ipecac. By G. A. Grierson.

Carthage Bark. By David Hooper, F.C.S., F.I.C.

The Hybridisation of Cinchonas. By David Hooper, F.C.S., F.I.C.

Note on Cephælis Tomentosa. By F. Ransom.

Mr. E. M. Holmes, F.L.S., has also promised a communication, the title of which has not been received. It will be seen that the number of communications is much smaller than usual, and, while this is to be regretted for certain reasons, it should not be taken as an indication of decay, the membership of the Conference having made a substantial move upwards during the past year.

We have previously (July 21, page 80) referred fully to the series of entertainments which have been arranged for, and may now add that Mr. Sydney Plowman, F.R.C.S., will preside at the smoking concert to be held at the Grand Hotel on Tuesday evening, September 4. Mr. Plowman's reputation for making things "go" pleasantly is sure to gather round him many of the worshippers of Nicotiana and others.

The New Zealand Tariff.

The new Customs Tariff which has been adopted by the Legislature of New Zealand is of an entirely protectionist character, and would appear to be very satisfactory to the protectionist advocates in the colony. But it is not an outcome of any organised attempt at promoting such a policy; indeed, the New Zealand Ministry which carries this Bill is largely composed of free traders, and the protectionists are chiefly in the ranks of the Opposition. The Government are seriously in want of money. Their expenditure has exceeded their income year after year, and all parties seem to be agreed that the easy process of "funding the deficits" must be abandoned. New Zealand commerce is much depressed, and direct taxes of any sort are likely to be unwelcome; so the free trade Ministry seem to have chosen the method of raising revenue out of the Customs as the one which would cause the least immediate friction. They hope to raise an extra 200,000% by the new tariff, their last year's Customs receipts having amounted to 1,251,651%, and some of them think they will promote the prosperity of the colony at the same time. The primage duty of 1 per cent. on the home value of everything imported is expected to yield about 53,000%. By this means the New Zealanders hope to pull themselves round. That by such a policy they must delay the restoration of better days for the colony is as nearly certain as anything can be. New Zealand has run into debt for the creation of fine harbours, railroads, and other public works; they are doing what they can to keep ships from the ports and traffic from the roads. They complain of bad times, and they are making them worse by protecting the few at the cost of the many. They need a larger population to develop their magnificent resources, and they are doing what in them lies to check the influx of "new chums." Their momentary advantage will be dearly bought.

* *

A Cigarette Scare.

In the *Times* of Tuesday there was printed a letter from one "Medicus," giving his address as the Middlesex Hospital, in which Egyptian and Turkish cigarettes came in for some condemnation: "Medicus" stated that having found, in the course of his private practice and that of the hospital, a marked increase in cases of malignant throat diseases, together with some of his colleagues, had made enquiries and had come to the conclusion that smoking was the cause, and he himself was persuaded that the cigarette imported from Egypt or Turkey is mixed, presumably to give it a peculiar taste, or flavour, with some insidious poison. A careful analysis of both the home manufacture and that of the foreign showed that in the latter a large proportion of opium and an un-

classified alkaloid was manifest, which was totally absent in the former. Consequent upon this letter there has been quite a panic of excitement, and from enquiries which have been made it would appear that there is a Turkish tobacco called Ayousuluk, and known more commonly as "Solook," which is grown near Smyrna on ground which is also used for the cultivation of opium. It is assumed that the tobacco absorbs many of the qualities of that drug. "Solook" is used for blending with inferior tobaccos in order to give them an aroma. It is admitted by well-known firms that this tobacco is highly injurious, and even poisonous. "Medicus's" "large proportion of opium and an unclassified alkaloid" form a somewhat vague allegation, the truth of which should readily be proved or disproved. While we wait for this, Mr. Melhado, the secretary-superintendent of the Middlesex Hospital, gives "Medicus" a severe chill by stating that that writer is unknown to the authorities of the hospital, and that the letter did not emanate from any member either of the medical staff of the hospital or of the teaching staff of the medical school, nor have any such analyses as described in the letter been made by the lecturer on chemistry or by any member of his staff.

* *

Whose are the Fees? The Pharmacy Board of New South Wales has the function of granting certificates to certain persons not chemists in the outlying districts of the colony, authorising such persons to sell poisons under certain conditions. For such certificates certain fees are paid, and it has just occurred to the Pharmacy Board to consider whether they or the Government have the better right to those fees. It appears that the Government have taken them, and it is estimated that since the passing of the Act in 1876 at least 570% has been paid into the Treasury from this source. The Board have therefore consulted counsel as to whether they should reclaim the amount from the Government. The following is the opinion they obtained:—

"The Act being silent as to what is to be done with fees on registration and the moneys received having been paid into the Treasury, I feel certain that no action will lie to get the moneys out, for the simple reason that no one can show a better right than the Treasury. If the Board had held the moneys themselves, possibly the treasurer might have found a similar difficulty in the claim, though my opinion is that the fees have gone to the right place. The Act is a public Act, the Board appointed by the Executive Council, or rather by Act itself, as a trustworthy representative body, and the fee is fixed. As a public body the Board would be liable to account to the Auditor-General for the application of the moneys received by them, and how could they account? It could never have been intended that the Board should appropriate the fees to their own use, which they might do if the disposal was left to their discretion. They occupy a similar position to the Marine Board, say, who issue certificates to masters and mates. In that Act no doubt it is provided that the fees paid for certificates should go to the Consolidated Revenue, so that no further analogy can be drawn than this, that such an application is proper or right, and we can easily see that it would be very undesirable that qualifying fees should be paid to the Board which passed the applicants.

(Signed)

"C. T. MANNING."

When this opinion was read to the Pharmacy Board at their meeting in June, an interesting discussion took place as to whether counsel's opinion should be published. The first opinion, which is the one which seems almost natural to pharmacists at both ends of the world, was that it should be treated as confidential, as it might be thought by the Government that the Board were acting in an inimical way to the claims of the Treasury. Mr. Melhuish, however, made the very sensible suggestion that the Board had simply obtained counsel's opinion for their guidance, and that as the Pharmaceutical Society would have to pay for the opinion it was only just that the members should know how the money of the Society was being expended. The President was of opinion that no objection could be taken to the publication of counsel's opinion, and after a time it was unanimously resolved that the opinion should be published.

The points of
 Mornington

N. Rad. Valerian. rly. 3y.
 Infunde finis in ag. 3y.
 Fortan. g. 1. 20 Col. 3y.
 22de
 Castor. rly. pub. 3y.
 Gint. Castor 3y.
 - Theban. g. 40 1844
 rly. e. Meesa. 3y.
 Ag. famant. 3y.
 Manns 2da 3y.
 of anis. g. 40. 4.
 Magna. e. 3y.
 N. R. 10. 3y.

ON CINCHONA IN JAMAICA. — The superintendent of the Jamaica cinchona gardens, in his report for 1887, states that some cinchona trees have been dying off during that year. On investigation, it was found that the bark at the junction of stem and root had been injured, and that in consequence the mycelium of a fungus had penetrated between the bark and wood. The bark had become loosened on the roots, and decayed away. It is probable that the injury was caused by the wind during the last hurricane. It would be difficult to detect such injury at first, but probably an early application of the remedy prescribed above for the orange trees would have saved the trees. Trees which are too far gone to save should be taken up by the roots and barked. The bark may be stored after thorough drying, for mildew does not affect the quantity or quality of the alkaloids when once the bark is dried.

THE CHESHIRE SALT TRADE.—Negotiations between the great Cheshire Salt Trust and the owners of the Cheshire salt fields are said to be proceeding satisfactorily. It is believed that nearly all the properties will be sold to the new company ; but the brine shaft, which gives access to large reservoirs of brine, has, it is stated, been sold to Messrs. Brunner, Mond & Co., of Northwich. The promoters of the new salt company are negotiating with all the owners of saliferous lands with the object of forestalling any future competitors, and the landlords are lending a willing ear to their overtures. The prospectus is about to be issued, and it is currently mentioned that the capital is fixed at 2,500,000*l*. It is stated that the bulk of the money has already been subscribed. The returns for July just issued show that the shipments of white salt were 83,865 tons, against 88,755 for July last year, the average for July for the past ten years being 102,292. There was a great spurt in 1884, when 130,065 tons were exported. The tariff duty in America is at present paralysing the Cheshire salt trade, but if salt is placed upon the free list there will be a greatly augmented business. There has also been a falling-off of exports to North America of 16,082 tons, against 23,787 for last year. Our best customers for salt are the East Indies, and with that market, as well as with those of Africa and Australia, business continues good. Germany and Russia have taken but little, while Denmark has bought quite an average. Despite low prices and diminishing exports, salt shares have experienced a great boom in consequence of the early prospect of a sale of the various properties to the Trust.

In the coffee auction room to-day Mr. Figgis, of Lewis & Peat, who officiated in the rostrum in the absence of his partner Mr. Devitt, had rather unexpectedly a somewhat unusual, and to him unpleasant reception. Upon beginning his sale "the room" rose *en masse* and sang the National Anthem, concluding with three cheers for the Queen. This was assumably done with a view of showing their opinions regarding the gentleman's candidature for Parliament in the Home Rule interest, the coffee people being for the most part uncompromising Tories. At the conclusion of the sale, "Rule Britannia" was sung with unanimity. A foreign gentleman present, who declined to remove his hat during the opening part of the entertainment, had it taken from him, and so roughly kicked about as to render his procuring a new one absolutely necessary.

ACIDS.—In *Citric* very little business is doing, and 1s. 6½d. to 1s. 6¾d. must be quoted as the nearest price. *Ovalic*, lifeless at 3d. *Tartaric*, dull and stagnant, English at 1s. 5½d. to 1s. 5¾d.; foreign a shade less.

ALOES.—A fair supply (50 cases) of *Cape* aloes was offered for sale at to-day's auctions, and about 20 cases sold at an advance of 6d. per cwt., from 21s. 6d. to 22s. being paid for good to fine bright hard; 21s. for slightly drossy; and down to 16s. 6d. per cwt. for soft and drossy aloes. There have been no arrivals recently. *Curaçao* aloes, of which 263 packages were shown, remain without improvement, only some capey to very common over-heated aloes being sold at from 28s. down to 15s. per cwt. *East Indian* aloes medium and ordinary qualities are plentiful, 150 packages being offered at to-day's sales, but really fine Zanzibar and Socotrine aloes remain scarce. Among the few lots sold to-day 14 packages in skins, mostly of ordinary quality, but partly false packed with fine bright, for which from 5l. down to 72s. 6d. per cwt. was paid, while 87s. 6d. per cwt. was refused for some good but half soft red Zanzibars in tins.

AMBERGRIS.—Fine remains very scarce and realises high values. At the auctions only a few lots of rather inferior quality were shown and bought in. For medium grey, of weak flavour, 70s. per oz. is required. The following are the statistics referring to the exports of ambergris from the Bahama Islands during the last ten years:—1877, 13 oz.; 1878, 472 oz.; 1879, 514 oz.; 1880, 18 oz.; 1881, 8 oz.; 1882, 26 oz.; 1883, 42 oz.; 1884, 6 oz.; 1885, —; 1886, 31 oz.

ANISE.—Russian seed is again somewhat dearer, in common with all produce from that country, consequent upon the improvement of the rouble value. From 23s. to 23s. 6d. per cwt. is now quoted for fairly good quality. The new crop is very late this year and the old stock is becoming smaller. *Italian* anise firm at 40s. to 42s. per cwt.

ANNATTO.—A parcel of 7 bags fine bright Ceylon seed brought 2½d. per lb., a very good price considering the position of the article. For 5 bales of medium quality 1½d. per lb. was accepted.

ANTIMONY.—At the auctions 100 cases Japanese star antimony were offered but all bought in, nominally at 24l., although 22l. per ton was suggested.

ARSENIC remains very firm at 12l. 15s. per ton for best white powder.

BAEL FRUIT.—Twenty bags pale quarters, slightly mouldy, sold at 1¼d. per lb.

BALSAMS.—*Canada* keeps very steady at 1s. 7d. to 1s. 8d. per lb. for good bright. *Copaiba* firmly held. Three barrels good bright thin Maranham were bought in at 2s. 8d. per lb., 2d. less being named as the price, but there were no bids. Several lots of *Peru* balsam were shown and bought in at 4s. 3d. to 4s. 4½d. per lb., an offer of 4s. made for one case being declined. Sediment sold at 3s. 2d. per lb.

BLEACHING POWDER steady at 8l. 5s. per ton here, and 7l. 6s. 3d. to 7l. 8s. 9d. on the Tyne.

BORAX.—English refined is still quoted at 30s. to 31s. per cwt., according to brand, but second-hand lots may be had at fully 1s. less.

BROMIDE OF POTASSIUM.—The prices remain as last

quoted, English and German brands selling at the same figures.

BUCHU.—Not much doing, but holders of fair greenish round leaves are not disposed to accept less than 2d. per lb. A parcel of ten bales long dark green stalky leaves was bought in at 6d. per lb.

CAFFEINE.—The English makers now quote bulk at 16s. to 16s. 4d., and 1 oz. vials at 19s. per lb. net.

CAMPHOR.—Some business was done in *Crude* Japan early in the week at 75s. spot, but since then the article has become firmer, and 80s. paid, thus showing an advance. English *refined* steady at the recent reduction, balls 1s. 1d., tablets 1s. 0½d. to 1s. 6½d., according to size.

CANARY SEED.—The market is quiet, and without much business. No further news has come to hand yet respecting the Dutch crop; even if saved under the very best of conditions, which seems exceedingly doubtful, the crop will not compare favourably with either last year's crop, or the crop previous to that one. We quote: *Turkish* seed, 39s. to 42s. 6d.; cleaned, 44s. to 46s. per 464 lbs. *ex* warehouse. *Dutch* nominally 43s. to 47s.; *English*, 40s. to 41s.; *Morocco*, 40s. to 47s.; and *Spanish* at 48s. to 53s. per 464 lbs.

CANELLA ALBA.—The exports of canella alba from the Bahama Islands from 1877 to 1886 inclusive are given as follows:—1877, 71,792 lbs.; value, 1,325l. 1878, 9,252 lbs. value, 42l. 1879, 37,516 lbs.; value, 184l. 1880, 2,928 lbs. value, 15l. 1881, 3,584 lbs.; value, 16l. 1882, 3,472 lbs. value, 16l. 1883, 12,656 lbs.; value, 110l. 1884, 7,551 lbs. value, 41l. 1885, 1,479 lbs.; value, 9l. 1886, 64,551 lbs. 389l.

CANTHARIDES very firm for *Russian*. Of three packages good bright flies, for which 4s. 9d. per lb. was not obtainable a fortnight ago, one cask now readily realised that price.

CARAWAY SEED.—A fair business is being done at reduced values, although it is said that 28s. per cwt. is still obtainable for old *Dutch* seed of good quality. At auction 19 bags common *Turkish* sold without reserve at 15s. 6d. to 15s. 9d. per cwt.

CARDAMOMS.—To-day's drug sales included 117 packages, of which by far the greater part were sold. The first lots went very cheaply indeed, but subsequently much better prices were realised, and on the whole the article, though irregular, must be quoted at fully the last rates. *Mysore* cardamoms realised: good medium to bold smooth pale pods, 2s.; long bold pale good appearance, 1s. 10d. to 1s. 11d.; medium pale fair long, 1s. 6d. to 1s. 8d.; small long pale, 1s. 4d. to 1s. 2d.; dark mixed, 1s.; *Ceylon Malabar*, mixed sizes pale rather heavy, 1s. 9d.; smaller ditto, 1s. 7d.; plump pale medium, 1s. 9d.; fair medium, pale and yellow mixed, 1s. 7d.; small pale to brown, 1s. 4d. to 1s.; brown and split, 10d. Seed sold at 1s. 3d. for some lots, for others 1s. 4d. was refused.

CASCARA SAGRADA.—The price remains firm at 55s. to 56s. per cwt. on the spot.

CASCARILLA.—A rather heavy supply was offered to-day, the catalogues comprising 147 packages. Holders nevertheless are firm, and had no difficulty in obtaining their limits, 30s. for good, but rather thin, fairly silvery; 28s. to 26s. for fair to darkish ditto. Altogether 69 bags were disposed of. The exports of cascarilla from the Bahama Islands (most of the bark being shipped from Nassau to the United States), during the last nine years have been as follows:

1878	1879	1880	1881	1882	1883	1884	1885	1886
63,255	193,607	86,300	69,778	31,951	44,354	13,123	471,468	112,105

CASSIA FISTULA.—Nothing fine offering. At auction 25 bales pretty bold, but dry wormy, pods were bought in at 12s., and 13 cases common East Indian pulp withdrawn.

CHAMOMILES.—The heavy fall in *Belgian* flowers of the new crop has been arrested, and it is said that in the growing districts higher prices are now again paid. In London 70s. per cwt. is said to have been paid for good second quality.

CINCHONA.—The South American barks offered to-day consisted mainly of flat *Calisaya*, of which two new parcels were shown. For good hard bright orange sound pieces 2s. to 2s. 2d. per lb. was paid, and from 1s. to 1s. 9d. per lb.

damaged lots. Fair but very broken *Lowa* realised 17d. per lb. For *Lima*, fairly good bright, 2½d. per lb. was realised. Forty-four bales low *Pitayo*, imported in 1882, were bought in. Privately similar bark has been sold at ½ per lb., and even that price can no longer be obtained.

HIVET still keeps very high in price, and good qualities are extremely scarce. One horn of 36 oz. offered to-day is said to be held at 23s. per oz. We hear that 21s. was refused for it privately.

COCAINE.—There is a good deal of competition between the makers, and the position of the article is a weak one. *German* brands remain as quoted last week. The price to which *Howard's* brand has been reduced is 22s. per oz. for the hydrochlorate in bulk, and 24s. per oz. for the tubes.

ORIANDEER SEED is now offering much more plentifully, and recent prices are scarcely obtainable. At the auctions 2 bags *Morocco* seed were shown, for which 12s. per cwt. is named as the limit.

BEAM OF TARTAR.—The demand has again subsided, and the market closes weak. First white cannot be quoted higher than 115s.; second quality 112s. to 113s. per cwt.

CUBEBS.—At to-day's auctions two parcels were offered. One consisted of 17 bags true cubebs, but the berries were rather shrivelled and mixed with stalks. Of this 6 bags, the most stalky, sold at 26l. per cwt., and the remainder was bought in at 27l. per cwt. The other parcel contained 27 bags, imported from Singapore; and while the sample showed the presence of true cubebs, the bulk of it consisted of the deleterious berries of *Piper crassipes*, with a sprinkling of acauleous berries. The lot sold with eager competition at 24l. for stalkless (bidding commencing at 20l.), and 22 5s. to 22l. 7s. 6d. for rather stalky berries.

UMIN SEED.—On the spot *Malta* seed is fairly well maintaining its price, although there is not much demand for it, but we hear that for forward delivery 30s. per cwt. f.o. Malta has been accepted.

CUTCH.—Values have declined since our last report, and at Tuesday's auctions from 24s. to 25s. 6d. per cwt. was accepted for a parcel of *RS* cutch, offered "without reserve."

BUTTLEFISH.—Fine quality is scarce. In sale to-day 5 cases fairly good pale but rather broken were bought in at 8d. per lb.

DRAGONS' BLOOD.—A recent arrival of 13 cases dragons' blood in reed was offered to-day, and sold at moderate prices, considering the scarcity of this variety. Good heavy pieces of fine fiery brought 8l. 12s. 6d. to 8l. 15s.; thinner and darker in fracture, 7l. 15s. to 8l. 5s. For 4 cases dull saffers 5l. is asked, while 2 cases common old finger of dull fracture and very broken were bought in at 7l. 10s. nominally.

MATERIUM.—It is said that there has been again a good price demand, and that 3s. 9d. per oz. is being freely paid for good *Malta*. At the auctions, certainly, there is no evidence of this.

ERGOT OF RYE dull. A few packages *Spanish* ergot were bought in at 1s. per lb. to-day, and for 10 bags fair *Russian* 8d. per lb. was refused.

INUGREEK SEED.—The *Mequinez* from Casa Blanca (Mocco) brought a heavy quantity, 2,236 packages, of new fenreek seed this week, and at the drug sales several hundred bags of this shipment, showing fairly clean but very imperfectly dried seed, were offered. For the best lots 9s. 6d. was named, and for others 8s. per cwt., 7s. 9d. being refused. Good *Mogadore* is held at 9s. 6d. per cwt., and *Egyptian*, of which a heavy quantity is said to have been lost at sea, at 7s. 4d. to 8s. per cwt.

GALLS.—Since last week further progress has been made in *Lima* galls, in which business has been done at 59s. 6d., and subsequently, it is said, at 60s. per cwt. on the spot. On Tuesday 75 cases were bought in at the auctions at the latter figure.

AMBIER.—Further considerable shipments have arrived since our last report, but still the price of *black* is fairly well maintained, though on the spot the highest figure of last week has not been obtainable, 26s. per cwt. being the highest

rate at which business is reported. A large business for forward delivery has been done at 25s. for July, 24s. 9d. for July-August, 23s. 6d. for September-October, and 23s. per cwt. for December-February.

GAMBOGE remains very firm, and is held at high rates for good parcels. To-day's auctions included 12 cases, of which only one, the commonest lot, was sold at 8l. 15s. for drossy and discoloured. An offer of 10l. 17s. 6d. was refused for fairly good but blocky and broken pipe, and 13l. is named as the limit for good bright free selected pipe.

GLYCERINE.—Double-distilled is again a little firmer. A fair business is said to have been done at 66l. for S.g. 1,260, and now up to 66l. 10s. per ton is asked.

GUM AMMONIACUM.—Two cases good bold partly blocky, yellow drop were bought in to-day at 23s. per cwt., 23s. 6d. being named as a possible price.

GUM ARABIC.—No fine selected *Turkey* gum was offered to-day, the nearest lots approaching it in quality being 3 bags fine white partly bold *Mogadore*, which sold at 15l. to 17l. 10s., the former price being certainly cheap; 8 casks white *Mogadore* sorts, rather red and drossy mixed, are said to be held at 9l. 5s. Of *Australian* gum, 17 bales good bold reddish were offered, but bought in at 57s. 6d. *Cape* gum was all bought in, good pale small drop to fair sittings at 65s. to 34s. per cwt. A Cairo correspondent writes, under date August 11: "The Soudan remains quite closed to business, and no reopening of the trade in that direction can be expected unless the Egyptian Government guarantees the safety of the Nile or Souakin trade-routes. We recently received a parcel of about 1,200 kilos. real white picked *Kordofan*, not sandfree, which has been at once disposed of at 1,025f. per 100 kilos. f.o.b. Alexandria. Of *Ghezireh* gum we have no stock whatever. In *Gums from the Red Sea Coast* business has been very fair, and almost the whole quantity which came in, viz. about 320 serons, has been sold at prices varying from 235f. to 290f. per 100 kilos. f.o.b. Alexandria. The stock here is about 234 serons, for which holders quote very firm.

GUM BENJAMIN.—The sale "without reserve" of a parcel of 4 cases *Siam* gum, fair almondy quality, slightly blocky and mixed as regards size, brought down the price, which had long been merely nominal, to 16l. 10s. to 16l. 15s. per cwt. *Sumatra* remained steady in price; good almondy centered seconds, brown bordered, are held at 8l. 7s. 6d., while fair palish almondy seconds, badly false packed, sold cheaply at 7l. 5s., and common dark false packed at 5l. 15s. Of *Palembang* gum, 9 cases, each of 8 small tins fine orange marbled, sold at 80s.; good ditto, at 75s.; and brown at 67s. 6d. per cwt.

GUM ELEMI in good quality is extremely scarce. Privately as much as 35s. per cwt. was paid a few days ago, and much higher prices have since been asked. To-day 32 boxes good white *Manilla* were offered, and 40s. per cwt. was named as the lowest price.

GUM KINO.—Six cases of very red gum were shown, and bought in at the nominal figure of 35s. per cwt.

GUM MASTIC.—Three cases good pale loose drop were bought in at 2s. 9d. per lb., but even at 2s. 4d. per lb. there was no response.

GUM MYRRH in good supply, 85 packages being shown at to-day's auctions. Though quiet, prices remain steady at 90s. per cwt. for fair Aden sorts. For garblings, 43s. was refused.

GUM SANDARAC.—For 5 casks yellow gum 65s. per cwt. is asked.

HONEY keeps steady with moderate sales. Good thin brown *Jamaica* is held at 23s. per cwt., while for 20 casks of darker colour and partly candied an offer of 18s. was refused. Eight barrels dull half candied *Cuba* were bought in at 24s. per cwt.

INSECT FLOWERS.—There is no alteration in the position since our last report.

IODINE unaltered at 9d. per oz. for *crude*, 13s. 6d. per lb. for *resublimed*, and 11s. for *potassium iodide*. At to-day's auctions 25 2-lb. bottles of red *iodide of arsenic*, of no stated brand, were withdrawn.

IPECACUANHA.—This morning an arrival of "115 cases" is announced per *Gannet*, via Antwerp, and there can be little doubt this heavy arrival will have a decided influence on the excessive prices asked up till this moment. At the auctions only one bale rather thin annulated root was offering, and sold at 6s. 10d. per lb., or about 6d. cheaper, if so small a transaction affords a test.

ISINGLASS remains very dull, and at the periodical auctions, *Brasil*, fair to good lump, sold 1d. lower; *Penang* leaf remains steady, all other descriptions unchanged. Of 120 packages *Brasil* a small part sold, fine lump, 3s. 1d. to 3s. 2d.; good, 2s. 5d. to 2s. 6d.; fair, 2s. 1d. to 2s. 2d.; ordinary, 1s. 10d. to 2s.; ord. brownish tongue, 2s. to 2s. 4d.; fair, 2s. 11d.; good honeycomb, 2s.; ord. to fair, 11d. to 1s. 4d.; thick brownish leaf, 2s. 6d.; pale purse, 1s. 6d. *West India* lump sold at 2s. to 2s. 2d. of 156 packages. *Penang* and *Saigon* barely a fourth sold; common *Penang* leaf, 1s. 9d. to 1s. 10d.; ord. brownish, 2s. 4d. to 2s. 6d.; fair stout little brownish to good, 2s. 7d. to 3s. 3d.; low dark tongue, 1s. 3d. to 1s. 7d.; ord. 1s. 10d. to 1s. 11d.; fair, 2s. 3d. to 2s. 8d.; fair purse, 1s. 5d.; ord. 1s. 1d. Fair *Saigon* leaf, 5s.; good stout brownish, 4s. 2d.; ord. brown, 2s. 2d. to 2s. 6d. of 147 packages. *Bombay*, a small part sold, common dark gelatinous pipe, 1s. 3d. to 1s. 6d.; fair, 1s. 8d. to 1s. 9d.; good, 2s. 4d.; fine bladder, 2s. 8d.; good purse, 1s. 4d.; fair, 1s. 2d. to 1s. 3d.; and ord. 8½d. to 9½d. Forty-one packages *Saigon* pouches were withdrawn.

JALAP brings steady prices, 12 bales *Tampico* selling to-day at 5½d. for fair partly heavy, and from 4½d. to 5½d. per lb. for mouldy, wormy, or burnt tubers.

KAMALA.—Three cases of dull appearance, and to all appearance heavily adulterated, were bought in at 6d. per lb. From 4d. up to 4½d. per lb. was offered and refused.

MAGNESIA.—*Carbonate* remains quiet at 40s. to 45s. per cwt., and *Calcined* is dull at ½d. to ¾d. per lb. Refined *Sulphate* (Epsom salts) are quoted at 7s. 3d. to 8s. 3d. for quantities, 8s. 9d. for smaller lots, and 12s. for medium to bold crystals.

MORPHIA keeps firm with a good demand. The makers still quote 4s. per oz.

MUSK.—A pretty sharp advance occurred at to-day's auctions, but it was not quite unexpected, as very stiff prices had been asked privately, and the arrivals have slackened lately. A fair selection of *Tonguin* pod musk, first pile, was shown, and the advance on this variety was not less than 4s. per oz. Nine caddies first pile small to medium, a few bold, fairly well filled, blue skin and underskin sold at 85s. per cz., although for a moment buyers hesitated to pay that price. For four caddies finest blue skin musk, 90s. is asked. Of 8 caddies, good ditto, rather small and broken pods, 2 sold at 82s. 6d. per oz. Third pile realised 51s. per oz. for good boldish but adulterated blue skin pods, and 18s. 6d. to 19s. for wet skinny black ditto. *Nepaul* pods, hard and skinny, fetched 41s. 6d.; grain musk, dull *Assam*, 21s. to 23s. 6d., and *Nepaul* musk, offered without reserve, 5s. 6d. to 6s. 6d. per oz. Skins and trimmings sold at 1s. to 6s. 6d. per oz.

NUX VOMICA.—Prices show some decline, but yet 12s. per cwt. was paid to-day for 22 packages rather dull *Bombay*. Another parcel of 80 packages, not much worse, sold at 10s. to 10s. 6d.; and for 10 bags dark and wormy seed 5s. 6d. to 9s. 6d. was paid.

OIL (CASTOR) is still tending weaker and difficult of sale. At the auctions nearly everything was bought in, fine pale firsts *Calcutta* at 4½d. For fair palish *Cocoonada* 2½d. is asked, and 100 cases yellow ditto were sold "without reserve" at 2½d. per lb.

OILS (ESSENTIAL).—Italian oils are firm, and *Bergamot* is still reported rising, being now quoted at 9s. to 10s. f.o.b. according to quality. In French and Indian oils there is very little change, but *Citronella* remains very cheap, 95 cases being sold to-day, partly without reserve, at ¾d. to ¾d. per oz. For *Lemongrass* 1½d., and for yellow *Nutmeg* oil 5d. per oz. is named as the price. Of *Ylang-ylang* 8 1-lb. bottles AJYS brand were sold without reserve at 3s. 11d. to 4s. 1d. per lb. to-day. The price of *Otto of rose* has now been fixed for the season on the basis of 19s. 6d. per oz. for very fine brands. A good deal of business had, however, been transacted before the fixing of the price at somewhat lower rates. As

regards the present crop of *Mitcham* oils we have received the following notes from a correspondent:—**Peppermint.**—The plants are this season being mowed instead of reaped, and some growers even use reaping machines for the first time, and within the last week a large area has been cut. Comparing the present with last year's crop after cutting, it is difficult to get away from the fact that 1888 will prove to have been a good season, but the distillers, notwithstanding, are pointing to the small yields of the stills this season, viz., about 7 lb., against about 9 to 11 lb. last year. But not too much attention should be paid to this fact, for, although individual stills are yielding less than last season, the deficiency will, to a certain extent, be made up in the extra bulk of crop to be distilled, but this will of course entail some little extra expense on the growers for distillation; at the same time the net results, after the whole crop has been distilled, will equal last season. In the meantime higher prices are asked, viz., 30s. to 32s. 6d. per lb. for the best new oil. *Lavender.*—The flower this year is still growing. It is one of the finest and largest blossoms ever seen, and may almost be described as giant in size. The bloom is certainly in many parts three times the size it was last year, and if the flower only yields in proportion the crop will be an unusually heavy one. Distillation is not likely, however, to commence just yet, owing to the extra bulk of peppermint to be got through, but cutting will no doubt commence next week. *Chamomile* looks well, and is also very full of bloom, giving every promise of being a good crop.

OIL (OLIVE).—Prices here have risen a little in sympathy with an advance in certain other fixed oils. *Mogadore* oil is now quoted at 34l. and *Messina* at 34l. 10s. *Spanish* remains nominal. Advances from the growing countries are as follows:—In *Naples*: The weather has been rather unfavourable for the new crop, the complaints of drought continuing, and in some localities the olive worm has made its appearance. Prices, however, have tended downwards. In *Sicily*: The markets have been quiet. The shipments from *Messina* in July were 235 tuns, including 109 tuns to England. In the *Ionian Islands* cool weather lately has been of great benefit to the new olives, and in *Corfu* the estimate for the new crop has therefore been raised to 12,000 tuns, provided the fruit passes satisfactorily through the next three months. The crop of 1887-88 in *Crete* is estimated to have produced a total of 14,929 tuns, of which 1,220 tuns remain in stock. The advices so far received of the progress of the crop of 1888-89 in *Crete* are very favourable, the weather having been propitious, and hopes are entertained of a yield doubling the last, or say about 30,000 tuns. At present, stocks being reduced, no business is passing for export to Northern Europe, either from *Crete* or *Asia Minor*. In *Mytelene* a good crop is anticipated, and a fair average crop in *Adramyti Aivali* and vicinity. From *Tunis* reports of the failure of the crop are now pretty fully confirmed. The prices being paid for local consumption equal about 39l. f.o.b. There is some probability that *Tunis* will have to import oil from Italy. In *Morocco*, the grain crop having turned out well, a fair olive crop is hoped for. There is said to be a good supply of old oil still in the interior of the country, though nothing fresh has found its way to the coast. The olive crop in *Spain* continues to progress very satisfactorily, but until the new oil comes to market it is not likely that any business for export to northern ports can take place.

OPIUM.—There has been a better inquiry on our market, and, in sympathy with the momentary position in *Smyrna*, a slight advance has been realised. We hear of some business in old *Druggists'* opium at 9s. 6d. per lb. The Dutch Government purchases do not appear to have yet been made. In *Smyrna* the speculative movement continues, and a fresh advance is reported from there; but it is thought that if European and American operators hold back for a short time longer, the movement must collapse. On August 11 the arrivals of new opium at *Smyrna* were 1,615 baskets against 275 at the same period of 1887.

ORANGE PEEL remains very neglected.

QUASSIA.—Eleven tons of wood were bought in to-day at rather higher rates, viz., 6l. 10s. to 7l. per ton.

QUICKSILVER has advanced a little. The principal importers still quote 7l. 15s., but in second hand 7l. 14s. has been paid.

QUININE.—Some business has been done since our last report at 1s. 3½d. to 1s. 4s. per oz. in second hand, and the agents for the B&S brand, in a circular in which they point to the improbability of an advance occurring in the article, announce that they reduce their price to 1s. 4d. per oz. for October-November delivery. Other German brands, however, are still quoted at 1s. 5d. per oz. *Howards' and Pelletier's* are both held at 1s. 8d. for bulk and 1s. 10d. for vials.

RHUBARB remains very dull, only a few lots of the 18 cases offered being sold: *Shensi*, fine round pinky picture at 2s. 1d.; bold bright flat, 1s. 11d. to 2s.; small round druggists' root, 3s.; fair medium size flat, half pinky picture, 1s. 3d.; bold coarse flat, 11½d.; *Canton*, medium to small wormy round, 4½d. to 6d. *High dried*, medium grey, 3s. per lb.

AFFRON is reported much dearer in Spain, and 57s. 6d. is asked for fine Valencia.

ARSAPARILLA.—Grey Jamaica, of which 92 bales were offered to-day, sold at 1s. 6d. to 1s. 8d. per lb. for more or less damaged.

ENEGA ROOT still advancing. Cablegrams from New York state that the price there is equal to 2s. per lb. in London.

SENNA.—The new crop of Tinnevely senna is now arriving in quantities, and no less than 250 bales, nearly all of fresh arrivals, were offered for sale to-day. Another shipment of 25 bales arrived on Tuesday per *Sutlej* from Bombay, and it looks as if for some time to come supplies would be pretty heavy. Notwithstanding this, a very brisk competition prevailed to-day, and nearly all which offered was disposed of at advance ranging from 15 to 30 per cent. Under these circumstances several druggists preferred to wait, in the hope that lower prices will rule shortly. The following prices we paid: Medium to bold greenish but stained leaf, 2nd class sea-damaged, 6d.; medium rather more stained, 4½ to 5d.; medium greenish but specky, 3½d.; small thin leaf rather yellow mixed, 2½d. to 2¾d.; small thin and darkish damaged leaf, 1½d. to 2d.; common black, 1d. to 1½d. per lb. The bulk of the lots ranged from 2½d. to 3½d. per lb.

TEA.—*China market.*—Congous are generally flat, and in some cases show a considerable fall in prices. Public sales are not heavy, but have gone off slowly, and common N.S. Shiam Moning has sold as low as 3¾d. to 4d. per lb., showing a fall of ½d. to ¾d. per lb. within a week. There is not yet much useful Moning to be had between 6d. and 7d., but casual value is to be had in strong Oonfaas and Pekoe. Floured Oonfaas from 8d. to 9d., and these grades are worth attention, some of the parcels sold within the last week at these prices being most useful teas. A few good leaf Ningchows of the second crop, have been sold from 9½d. to 1s. Kaisows are still too dear. Sonchows from 8d. to 10d. being wanted by the trade, but are dangerous to buy at present rates. Some useful Saryunes are to be had from 7d. to 8d., but the better grades of Saryune picked over, and there are few left worth 9d. to 10d. Scented Cairns are now tolerably plentiful, and have been sold this week as low as 5½d. for a chop of 2,000 boxes, being the lowest quotation so far this season. Canton S.O. Pekoes are in very small supply and mostly very undesirable teas, where there is nothing in N.S. Foochow S.O. Pekoe to be had under 1s. 1d. Macao S.O. Pekoes are very scarce, only some six or eight parcels having been seen so far. New greens, boxes of Ping Suez Gunpowder, Young Hyn, have sold fairly cheaply, being mostly good liquoring tea, but last season's boxes gunpowder are exceedingly cheap, really handsome leaf teas fetching 8d. to 9½d. *Assams* are now offering freely, and show generally easier rates, but there is no decided fall to note. Broken teas at 7d. are much too dear, and there will have to be a heavy fall before the grades show anything like the value offering last autumn, when good useful broken teas were selling from 4½d. to 5d. Pekoes from 10d. to 1s. are useful teas, and not dear.

WAX (BEES') firm, with a steady demand, and sales at the following rates: *Jamaica*, fine yellow, 6½; red orange to paleken orange, 5l. 12s. 6d. to 5l. 17s. 6d.; grey mixed, 5l. 1d. to 5l. 5s. *Madagascar*, fine pale chocolate mixed, 52s. fair *Mogadore*, 85s. per cwt.

WAX (CARNAUBA) advancing and scarce. 87 bags all bought in at high rates; 60s. for fine yellow mixed with a little grey (58s. would probably buy), and 45s. for dull grey.

THE AMERICAN MARKETS.

NEW YORK, August 10.

THE market this week has been steady, but without anything of any very special interest. There has been a fair jobbing demand only for goods for consumption, and no speculative interest of any kind has been shown. Changes during the week have been few among the leading articles and everything is very quiet.

ACID (CITRIC).—Very little of interest to note; demand good, but equalled by the supply, at 50c., less 10c. duty (1s. 8d.), for either foreign or domestic. American manufacturers are still only delivering on contracts, but manage to keep their trade supplied and thereby keep the market steady.

BALSAMS.—In *Copaiba* there has been a considerable trade doing during the past week, and some 70 cases have been sold from first hands at 45c. (1s. 10½d.) for Central American, now held 50c.; other grades are unchanged and quiet, 50c. to 54c. (2s. 1d. to 2s. 3d.) for Pará, and 60c. (2s. 6d.) for Angostura. Canada *Fir* balsam is nominally quoted at \$2 65 for new crop (11s.), and Oregon at \$1.10 (4s. 7d.), but little demand for the latter. *Peru* balsam is easier and obtainable at 102½c. (4s. 3½d.). *Tolu* remains quiet at late quotations, 28c. to 30c. (1s. 2d. to 1s. 3d.).

BROMIDE OF POTASSIUM is unchanged. The price still remains 33c. for 1,000 lb. lots and upwards.

CUBES are in good demand at previous quotations, \$1.75 (7s. 3½d.) for prime sifted and stemless, and \$1 50 (6s. 3d.) for ordinary.

CUTTLE FISH BONE is cheap here, selling at 20c. (10d.), which is really below cost of importation.

LYCOPodium.—The looked-for increased demand has not taken place yet, but prices are well maintained, and 39c. (1s. 7½d.) is about the ruling figure at present.

OIL (COD LIVER).—*Norwegian* rather neglected at \$22 to \$23 as to brand, duty 25 per cent.—\$17.50 to \$22.50 (72s. 11d. to 93s. 9d.).

OILS (ESSENTIAL).—The trade in this line has been quiet, and no very new features present themselves to notice this week, though prices on the whole are fairly maintained, and business is mainly of a jobbing character. *Peppermint* oil is quiet at late prices but firm, \$3 (12s. 6d.) to \$3 25 (13s. 6d.) for HGH in bottles, \$2.35 (9s. 9½d.) for New York State, and \$2 (8s. 4d.) to \$2.10 (8s. 9d.) for Western. *Oil of Lemon* is lower on account of accumulation of stocks, and the best brands are obtainable at \$1.60 (6s. 8d.) to \$1.70 (7s. 1d.) down to \$1.15 (4s. 9½d.) for so-called good but almost unknown brands. *Pennyroyal* has advanced to \$1 (4s. 2d.), *Sassafras* rules at 48c. (2s.), *Wintergreen* still keeps up and is firm at \$1.90 (7s. 11d.).

OPium has held its own for nearly a month now, and the advanced prices have been well sustained, in the face of advices of a large crop, which, however, are accompanied with reports of damage by various causes. Whether these reports have had the tendency to sustain the price or not is doubtful; it is the general impression that the article has been losing money for everyone handling it for the past year and that it had got to the bottom, and all interests have combined for better prices; thereby an advance was made and has been upheld, by common consent, no doubt, of all interested parties, both on this side and abroad. The price this week is \$2.80, less \$1 duty (7s. 6d.), \$1.80 for single cases, and \$2.75 for lots of 5 to 10 cases, and firm at these figures with a fair jobbing demand.

QUININE.—There has been a quiet steady demand for foreign, with unchanged prices. We quote 34c. (1s. 5d.) to 35c. (1s. 5½d.), according to brand and quantity. Domestic continues unchanged at 43c. (1s. 9½d.) for bulk.

ROOTS.—*Senega*, *Golden seal*, and *Pink* all continue in the same state as when last reported upon, and there is nothing at present of interest in them to report.



Memoranda for Correspondents.

Always send your proper name and address: we do not publish them unless you wish.

Write on one side of the paper only; write early; and devote a separate sheet of paper to each query if you ask more than one, or if you are writing about other matters at the same time.

If you send us newspapers, please mark what you wish us to read.

Ask us anything of pharmaceutical interest: we shall do our best to reply.

Before writing for formulae consult the last volume, if you have it.

Letters, queries, &c., not noticed in this issue will, if possible, be attended to next week.

A Move Forward.

SIR,—I am pleased to find that your correspondents are of opinion that if we really intend to make a move, we must induce the trade generally to join the Pharmaceutical Society, as the first step.

It has always appeared to me a strange oversight in the various Acts, that it is possible to disconnect one's self from the Society. Probably the framers of the Acts never suspected but that all those who were interested in the schemes of inclusion would take advantage of them, and that the whole trade would be enrolled. We are disorganised and almost helpless, in consequence of our lukewarmness and the love of our own guineas. Let the subscription be regarded as a licence to practise, and not as a useless expense which may well be saved.

The public make a muddle of pharmaceutical chemists, members and associates of the Society, and chemists and druggists—a natural muddle, which ought not to be possible. A trade divided against itself will never impress the nation or Parliament with a sense of its wrongs.

Here, sir, in my opinion, is a chance for the ill-used chemist to improve his position. If I had the pleasure of the acquaintance of any members of the Council I would certainly sound them on the question of a fresh and seductive offer of membership in the Society. Once in membership, we should be in a position to assert our rights to a further recognition of status by the Legislature.

Yours truly,
HEDER.

SIR,—I am an associate of the above-named Society, and contribute 10s. 6d. per annum to its funds. Any remarks which I may hereafter make cannot, therefore, be put down to the malignity of an outsider, but will be entitled to the consideration which is due to one who has the interests of his own at heart.

The points which I wish to discuss at present are the "Society" and the "Forward Movement," and their relation to each other.

As I always like to begin at the beginning, perhaps it were not altogether waste time to consider the question, "What is the Pharmaceutical Society?" To many of my readers, perhaps to the majority, it is nothing but an examining body, and that function is the chief aim and object of its existence. But it is something more. It is the official representative of British pharmacy, and as such will have to be reckoned with in any movement which has for its object the bettering of that (at present) rather languishing interest. Therefore, its relation to any "forward" movement is apparent. Now, next we have to consider what were its probable attitude towards such a movement. Experience tells us. If the movement be an educational (and therefore theoretical) one, having for its object the training of chemists in straighter educational ways than at present hold, it will have its assistance. But if the movement be a business and practical one, it will have to count not only on the absence of the Society's support, but on its indirect hostility. This is apparent from the policy pursued by the Council with relation

to the present Pharmacy Bill. As long as that was confined to "educational advancement," the Council could not exert itself enough. But as soon as that little clause relating to "branches" was inserted, the ardour cooled. This has been noticed by one or two of your correspondents who have written respecting "Heder's" suggestion. And it is somewhat curious that they both suggest a similar expedient as one of the ways of grappling with and abolishing this impediment. Yet they miss one cardinal point. Their suggestion is that all registered chemists should join the Society, and turn out the men at present constituting the Council, and put in their place others pledged to a more business-like, if less "professional," policy. But surely they forget that the majority of the registered chemists of to-day are, like myself, Minor men, and, therefore, were they even to join the Society, they would be, like myself, without a voice in the political conduct of the Society.

My object in writing this note is chiefly to show that it is vain to think that any good can be obtained by appealing to the Society, or by indulging in any hope of moving it to better things while its constitution continues to be determined by the present method of election.

What I would propose, therefore, would be that we should first have a clear and settled basis as to agitation, and a clear case of apathy and neglect against the Council. And this brings me to my second point.

We are asked by your esteemed correspondent "Heder" if a forward movement be possible. A forward movement where? and what for? We must not indulge in generalities about the injustice of the "stores," but must have a clear and settled point and issue in view. Why not begin at home? Have we no evils of our own to remedy? I think so. The one of branch shops, for instance. What right have we to cry out against the incompetence of outsiders when we allow incompetence to ape competence within the fold? Then, when we have a clean front, we can, without fear, make those demands which seem just. But, sir, let us be sure they are just. I notice that "Viator" suggests that it should be made penal for anyone to deal in any drug or *patent medicine* whatever. Now, sir, let me ask you whether such a proposal would stand the slightest chance of ever being adopted. Is there any superior skill in selling Mother Seigel's syrup which a chemist can show over a grocer or an oilman? Or is his neatness in wrapping up a box of Beecham's pills so much more beneficial than that of the grocer as to warrant him charging 3d. extra? Let us have something tangible to go at. Surely the present state of pharmacy is not so devoid of evil that we must conjure up an imaginary one on which to expend our energy. I think we may safely conclude that any movement having the object of conferring upon the chemist the monopoly of a sale in Epsom salts and Holloway's ointment, &c., will meet with no sympathy outside, and but a shame-faced support from within. If we are to demand legislation in the matter of patents at all, rather should it be to have them established on the French system. But there are other and more pressing needs. The present assumption by companies of the title of "druggist," the reckless distribution of poisons, are subjects worthy of consideration; but above all there is one evil standing out, and that is the dispensing of prescriptions by unqualified proprietors of apparently chemists' shops. Dispensing is the one accomplishment of the chemist towards the proper acquirement of which all his other studies are subservient, and it is the most precious possession. Therefore, I would urge the agitation for securing it as his monopoly. And I do not mean simply dispensing of poisons, but *all* dispensing. It is his *right*, and it is the only thing worth agitating for as a right, after his right to his title. The difference between the skill of making up a prescription which may only have mag. sulph. and tinct. card. co. in it and in selling an ounce of the former over the counter is too obvious to need comment.

Now, sir, a final word as to agitation. I would suggest, as the first step, that the Society should be asked to grant, not as a favour, but as a right, the associates a voice in the conduct of its affairs, so that we can elect men who are in touch with the opinions of the majority. If the Society should refuse, the second step should be the secession of all who may at present belong to it, but who are in sympathy with this demand. This, I take it, would give us a considerable body, which might become a powerful lever in matters pharmaceutical. Then we should have a united body, having for its

the advancement of pharmacy, and demonstrating the necessity which alone can ever win the point at stake, the necessity arising from merit, right, and knowledge. Trusting at this may not be allowed to drop,

I remain, yours truly,
H. R.

SIR,—The Pharmaceutical Society are now sending out a circular calling attention to the School of Pharmacy, and on looking through the same, the thought again occurs, what a piece! Take the enclosed instance of a "bogus company," which on the face of it bears the true intention of its formation, viz., defiance of the Pharmacy Act and the Pharmaceutical Society. Where is the boasted protection of the chemist, when, as in this case, nine persons combine and call themselves chemists and druggists, though they are each all unqualified? This company has been going on since June, 1885, and many others are being formed and registered. Surely it is time to exercise the majesty of the law, and not allow these schemers to openly defy the Pharmacy Acts. The Pharmaceutical Society must either "chop or lay down the bucket," and that pretty soon, unless they wish to be abolished.

Yours faithfully, X. Y. Z.

P.S.—How the parties in these concerns must laugh in their sleeves and chuckle to think that an outlay of about £1. does the trick. But the serious side of it is the utter impotency and acknowledged defeat of the Pharmaceutical Society by a lot of "beardless boys."

August 21.

SIR,—In looking over the correspondence column of your valuable trade journal I have been greatly interested in the many suggestions and advices given from time to time for the bettering of our woebegone condition. It is a fact, and the sooner we see it ourselves the better, that the patent medicine manufacturers and the stores are running off with almost all the worth of our business. The public, at least my part of it in the north, look upon a druggist as one who is bound to give all his attention, patience, and a great amount of advice at medicine for the sum of 1d., and if the pennyworth does not come up to expectations in the way of effect he must stand a great amount of abuse; and yet the same public will pay cheerfully for patent medicines, without any humbug or loss of time. What does this point to but that steady and persistent advertising of remedial agents takes the popular fancy, and that our only chance of gaining popular favour is to run in the same lines? But the question arises, how is this to be accomplished so that we may all have the full benefit? I know that many a poor chemist in these days is not able of himself to go into a systematic expenditure for advertising; but you, sir, who have done so much in advocating our cause, might be able to devise some scheme which might enable us to overcome our present depressing circumstances; for it is hard, very hard, for many good, honest, upright men to be behind the counter from 8 A.M. to 11 P.M., wearing down mind and body, and still hardly able to make ends meet. Our business is supposed to be very respectable, and we and our families are expected to dress in accordance with that respectability, while our incomes, after paying feeding, rent, and taxes, will hardly allow us to pay for moleskin trousers. I have one suggestion, but I don't know if it would be workable, still it may stimulate some more fertile brain to work out a scheme. My idea is that we should combine amongst ourselves in one box or union; appoint some trustworthy person to act as secretary and treasurer, take charge of the funds, enter into advertising contracts, pay contracts, be intermediary between members and printers, bottle manufacturers, &c. Each chemist on becoming a member to contribute, say, 4s. a year, payable quarterly; if 4,000 chemists join, this would give an income of 16,000l. to be spent almost wholly on advertising; each member would give the secretary the name of the best circulating paper in his district; the recipes of medicines to be advertised would be an open secret to all the members, so that all members would be their own manufacturers. Labels, wrappers, bills, and all printed matter to be uniform in everything; this could be got from one printer. Bottles, boxes, or pots to be of the same uniform size and get up, so that each member would be selling the same articles, and reaping the full profit of his labour and energy.

I think it is possible, with such combination, good tact, and fertile resources, both of matter to advertise and money to pay for advertising, we might in the long run be able to hold our own with, if not supplant our Yankee cousins.

SCOTTY.

A Chapter of Biblical History.

SIR,—The above may seem an eccentric title for a contribution to your valuable correspondence columns. I fear, however, a certain section of your readers and of the trade, or rather profession, generally are woefully ignorant of the peculiarly analogous conduct of the Children of Israel, as related in the Book of Exodus, in murmuring against Moses—I refer to our much maligned, if not divinely appointed leaders at Bloomsbury. Perhaps you, Sir, therefore, in a spirit of Christian charity, may see fit to publish these random outpourings of a vexed and much exercised spirit. By the way, Sir, as an outsider I should think this last phrase will suit your case precisely; for I must confess the admiration I hold for the Christian resignation which both yourself and staff must be called upon to exercise so frequently, and which I must ask you to extend to myself on this particular occasion.

Looking over your pages for a year or two back, with what a delightful frequency can we observe the titles "The Advancement of Pharmacy," "Pharmacy as a Profession," "Pharmacy and the Sister Profession," &c., repeated. What ambitious ideas we see therein aired! What lofty notions! What impracticable schemes! What an autocratic scorning of the £ s. d., or, as it is often styled, the mercenary part of our profession! What an asinine imbecility is therein displayed! A spirit quite contrary to that of the energetic business man, which seems to be the last thing these grumbling fossilized old humbugs, styling themselves pharmacists, pharmacutists, &c. *ad nauseam*, seem to aim at.

No! with a tenacity worthy of a better cause they talk loftily about "our sister profession," of the Pharmaceutical Society, and of the benefits to be derived from both, as well as from some Act of Parliament to be passed for the alleviation of the oft-told sufferings of our sect, and are content to go on eking out the same miserable existence (I am afraid, sir, that phrase is getting rather hackneyed, but it is the best which suggests itself to me) instead of keeping wide-awake to the changed conditions of trade demanded by the changed times, and by keenly aggressive cutting competitors.

These are the men who have most contributed to the present state of things, and given such an impetus to the "Shoolbred's" and "Lewis's" of the times, and brought general discredit on the "trade." Is it to be wondered at that our customers flock to the stores? With what an amount of stupidity must these "would-be professional men" credit the general public, and how woefully the latter are undecieving them.

We are traders, and as such must exert ourselves to the utmost to keep abreast of the times, and secure the "almighty dollar." We must not expect too much from the medical fraternity, who as a body are just as keenly alive to the money-making part of their business as we can be, and who, in my opinion, will be a long time before they deliberately throw away such a paying branch as the dispensing of their own medicines. Nothing short of a repetition of the plagues of Egypt will effect such a much-to-be-desired end.

It is all very well for the gilt-edged pharmacist of the West-end of London and a few other favoured localities to sneer at his country brother, who, in order to make both ends meet, sells soft soap, paraffin, and the hundred-and-one odds and ends which make up his business—he can afford to do so. I respect the man who does this rather than degenerate, through stress of competition or other causes, into a grumbling old fossil, and, ultimately, an aspirant to the benevolent fund of that Society, from whom he has expected—and is likely to expect—so much.

If your neighbour the grocer starts cutting patents, &c., fight him at once, and leave no stone unturned to oust him from the field. In fact, if you see that people are going to the neighbouring city and getting their medicines, &c., from the drug or other store, kept by Brown, Jones, or Robinson, don't wait for such an emergency, but set the ball rolling yourself, and don't be dissuaded by the sneers of others from keeping it up.

But it strikes me all this rhodomontade is foreign to the

heading, and that I am as far off as ever from that chapter in the Bible which I had in my mind's eye, and with which I was—or, at least, fondly hoped I was—going to save my sinful brethren. However, the subject is a comprehensive one, and will keep, unless the spirit moves someone else to unburden his harassed feelings, brought on by a continual perusal of your correspondence columns, as has been the case with

Yours truly,
NEMO.

Jambul Seeds.

We have received communications from Mr. A. Ball, Mr. Thomas Christy, Mr. Prosper H. Marsden, and Henry Hodder & Co. regarding Jambul seeds. The last named write:—"Jambul, or jambool, are the seeds of *Eugenia jambolana*, synonym, *Syzygium jambolanum*. Of great value in diabetes, rapidly reduces the quantity of urine and percentage of sugar, without abstinence from starchy food. Dose: 2½ to 5 grains every four hours. References: *B. M. J.*, i., 1887, page 617; *L.*, ii., 1887, page 733; *P. J.* (3), xvii., page 802. Frequently prescribed in West of England."

Making Horse Balls.

SIR,—We have occasionally to make up a formula which is too crumbly to manipulate in the ordinary way. In this case I get an old homoeo. bottle case with the bottom out, line it with waxed paper, and ram in the ingredients, and then push through. Yours truly, HEDER. (115/46.)

LEGAL QUERIES.

29/114. *Di.*—We do not see any reason why you should not allude to Gull, Mackenzie, Thompson, &c., in a work on household remedies; nor why you should not acknowledge indebtedness to Quain's "Dictionary" and other works. Of course you are aware that such acknowledgment does not give you the right to "lift" whatever you like from those works.

12/114. *E. F. H.*—A master who takes an apprentice and who during the period of apprenticeship sells his business, cannot compel that apprentice to go with him elsewhere, nor can he, without the latter's consent, transfer him to his successor. He has agreed to a contract which he must himself fulfil, or he renders himself liable to an action for damages.

53/115. *Enquirer.*—You must get special permission from the Board of Inland Revenue if you wish to use methylated spirit in any medicinal preparation. See answer to *Amicus* last week.

15/116. *T. J. W.* asks whether a label worded "White Oils. Particularly recommended to runners and athletes. To be well rubbed into the parts affected night and morning," with picture of a man having the embrocation applied to his leg, would render the same liable to medicine-stamp duty? The suggestion is obvious, but we should think the preparation would not be liable. It would be prudent, however, to inquire from Somerset House.

10/116. *Chems.*—A pharmaceutical chemist holding only a British certificate is not entitled to practise as a pharmacist in Ireland. He must obtain the Irish certificate. A dentist qualified in England is entitled to practise dentistry in Ireland without further examination or registration.

22/117. *W. G. M.*—Your labels do not appear to us to be liable.

21/117. *A. B. C.*—Your labels render the preparations liable to medicine-stamp duty because you call them "Allen's" thus, implying a proprietary right. Omit "Allen's," and give name and address at foot, and the stamp will not be required.

Minor.—The anomaly in respect to the right of limited companies to use the title "chemist and druggist" has been so often discussed that we cannot make room for your letter, which discloses nothing new.

DISPENSING NOTES.

The opinions of practical readers are invited on subjects discussed under this heading.

Dispensers who have compounded any of the following prescriptions, or similar ones, are requested to communicate their results to the Editor.

Country Difficulties.

SIR,—What should be dispensed for

Palv. ferri subchlor.	..	..	gr. vj.
Ung. petrolei	..	..	3ij.

The prescription bore the mark of a well-known London firm, and on applying to them for some of the first-named article they said they did not keep it. They had previously advised the customer not to have it made up in the country. Is this a fair or right way of doing business? Would Martin-dale's ung. petrolei, or ung. paraffini B.P. be the second article? T. T. (4/1.)

[By "ferri subchlor." we presume that the writer of the prescription means ferrous chloride, yet "hydrargyri subchlor." seems a more likely interpretation. This the first dispenser, by a little professional courtesy, and following custom, could easily have indicated on the prescription. "Ung. petrolei" is a paraffin ointment sent out by Messrs. Allen & Hanburys. It is somewhat harder than vaseline. The London Hospital article referred to by "T. T." contains yellow wax, and should not be dispensed except when specifically mentioned.]

A Thick Mixture.

SIR,—Is it possible to make a permanently good mixture of the following? I find that within an hour or two of mixing, if not shaken, the magnesias—mag. calc. pond. used—settles into a mass which no amount of shaking will disturb. After a somewhat longer interval it also becomes much darker in colour. As the customer who handed in the prescription cannot sit up all night to "shake the bottle," the mixture has become useless. Yours truly,

WAX. (114/4.)

Potassii brom.	..	..	gr. xxxij.
Sodii bicarb.	..	..	3ss.
Mag. pond.	..	..	3iss.
Syrup. aurant.	..	..	3ij.
Tr. chlorof. co.	..	..	℥xx.
Aque ad	..	..	3ij.

Ft. mist.

114/38. *Yorkshire.*—The pills containing citrate of iron and quinine with extracts of henbane and belladonna may easily be massed with the aid of proof spirit. Coat them with gelatine.

MISCELLANEOUS INQUIRIES.

A large number of correspondents ask us for formulae which have already been published in this journal. It is not fair to more careful readers that we should frequently repeat such information, and so long as the back numbers containing the formulae or replies required are in print we must decline to do so. Back numbers of our weekly issue can be obtained from the publisher at 4d. each.

Chillie Paste.—See October 15, 1887, page 502. (Scotia. 114/24.)

Cod-liver Oil Cream.—See November 19, page 646, and December 3, 1887, page 699, also page 205, February 11, 1888. (Scotia. 114/24.)

Glycerine Cream.—See page 144, January 28, 1888. (*infectus*. 115/50.)

Chutnee.—The formula you gave for chutnee on June 23 answered very well except that it contains too much cayenne pepper. I find 1 oz. instead of 6 oz. strong enough.

R. D. M.

2/113. *Anxious.*—We cannot now trace your question. It has not been answered, you had better repeat it.

Mackenzie's Eyewash.—*Collyrium* sends the following in reply to 66/111:—

Hydrarg. perchlor.	..	..	..	gr. ij.
Ammon. chlor...	..	..	..	gr. xij.
Pulv. cocci cacti	..	..	..	gr. iij.
Spt. vin rect.	..	..	..	3ij.
Aq. ad	..	..	..	3xij.

M.

Let stand twelve hours and filter.

Hyd. perchlor.	gr. j.
Ammon. mur.	gr. vj.
Coccus cacti	gr. iss.
Spt. vini rect.	3j.

M. et adde

Aq.	3viiij.
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3. To be used tepid thrice daily, allowing a little to flow on the eye.

A. Mc. I. (116/6)

To prevent children biting their nails *C.* (31/110) said colocyth, aloes, and chiretta had been tried. *Collyrium* says, "ly tinct. capsici."

Sealing the Handcuffs.—With this appropriate remark a correspondent sends us a reprint from THE CHEMIST AND DRUGGIST of a clever advertisement entitled "Pirates," inserted some time since by Messrs. Burroughs, Wellcome & Co. The advertisement commenced—"They [the pirates] are getting rather numerous of late. They make bungling work of it. They copy what they think will do them most good, and not one of them has had the manliness to as much as say 'by your leave, sir.' They copy our advertisements, and in divers ways seek to deceive the public and steal our thunder." At the foot of the circular on which this is reprinted is found the name "E. F. Williamson, manufacturing and export chemist, New Cleve, Lincs."

Marlem Oils.—*Heder* will be obliged by any information respecting these oils. He has always sold Dutch Drops when asked for the above, on the understanding that this article is known by several names. In some places it is also called "Medicamentum." To-day, however, an American gentleman detected the identity.

H. D. sends samples of six ores with the request to inform him if they contain gold. This is a good opportunity of stating that we do not make analyses for amusement to ourselves or to divert analytical fees from the proper channels, but simply for the purpose of acquiring information which is likely to be useful to chemists and druggists generally. "D. H. D." should consult Fresenius regarding the readiest methods of detecting the presence of gold.

1/12. *Vet. Pharmacist.*—We can supply copies of the number containing the formula for Glycerine and Cuember. We do not have the formula for the ointment named.

1/68. *Argentum.*—Silver Plating Solution.—The formula given on page 176, volume 32, is for use with a battery. In plating without a battery the silver is driven out of its combination by the same piece of metal on which it deposits, and the baser metal disappears in exact proportion

to the quantity of silver deposited. But the deposit ceases directly the thinnest layer of silver covers the baser metal, for the latter can no longer reach the solution of silver to take its place. The metals should be first dipped in a solution of caustic potash, then thoroughly rinsed in fresh water. Articles of copper, brass, or German silver should next be heated and dipped in dilute sulphuric acid and water, then in pure water. The simplest silvering solution is made by mixing into a thin paste 3 parts of washing soda, 1 1/2 of common salt, and 1 of silver chloride with sufficient warm water; another mixture may be made with the salt and silver chloride alone. The paste is applied with a rubber until the surface is properly coated, and should then be washed, dried, and, if possible, varnished with hard copal varnish. Another solution is made of cream of tartar, 1 part; common salt, 1 part; silver chloride, 1/2; dissolve in boiling water in a common kettle with the addition of a little alum. The articles are stirred up in this till properly coated, more paste being added with each batch of articles to be whitened. This bath improves by use.

115/3. *Timon.*—(1) We should think that you have not added sufficient ammonia to the solution of the acetate of morphine. Try again, and let us know the result. (2) *Indian Brandy.*—There are various formulæ for this. The following is based on the analysis of a popular article:—

Tincture capsici	..	..	..	3j.
" myrrhæ	..	..	..	3ij.
" croci	..	..	..	q.s. (to colour)
Syr. simplicis	..	..	..	3iv.
Spt. aether. nitrosi	..	..	..	3iv.
" rectificati ad	..	..	..	3x.

M.

(3) Compound rhubarb or other mild aperient pills are generally given when Castor Oil Pills are called for. Some chemists add a small percentage of the oil to the masses. (4) We have no personal experience of the Pill Coater.

115/1. *Tenax.*—The more popular Cements for China are simply solutions of isinglass with a little mastic in glacial acetic acid. The following is a suitable formula:—

Isinglass	..	..	..	1 oz.
Mastic (powdered)	..	..	..	80 grains
Water	..	..	..	2 oz.
Glacial acetic acid	..	..	..	4 oz.

Soak the isinglass in the water, and when all has been absorbed add the acid previously mixed with the mastic. Heat gently until a clear solution is formed.

115/47. *B. P.*—Try Potter & Clarke, 75 Weston Street, S.E., for specimens of rare drugs.

115/72. *Keratin.*—In coating pills with keratin they should first get a thin coat of cocoa butter. The keratin should be dissolved in solution of ammonia and evaporated to a proper consistence, then used in the same way as solution of gelatine.

116/54. *J. G.* (Constantinople).—A good and cheap "gum" for bottle labels may be made by dissolving with the aid of heat 1 part of dextrine in 2 parts of water. An excellent Paste for Labels is made as follows:—Rub in a mortar, tragacanth, 3vj.; acacia, 3ij. (both powdered); with glycerine, 3ij.; and water, 3vj. Then add gradually boiling water, 3v.; and 10 drops of oil of cloves, and 5 of oil of wintergreen, before cold. Put up in covered pots this makes a very saleable article, its convenient form being not the least recommendation. Ladies do not object to keep a small pot in their writing-desks; it never makes a mess, so that it is the very thing for children's scrap-books; for shop use it is easier made, and keeps better than flour paste.

116/59. *Omega.*—The class and examination fees for the degree of M.B., C.M., Edinburgh, amount to 110 guineas.

116/53. *Omnia*.—Rectified spirit (ordinary best quality) is used for diluting perfumes, but it itself should first be diluted with a fourth of its volume of water. Of this diluted spirit not more than 3 oz. can be added to the pint of the so-called triple perfumes without injuring the "bouquet."

86/26. *E. G.*—Elepizone.—Regarding this preparation, Mr. Martindale says in the "Extra Pharmacopœia":—"A nostrum sold under this name contains approximately bromide of sodium, 30 grains; bromide of ammonium, 30 grains; bromide of potassium, 20 grains; tincture of nuxvomica, 15 minims; with caramel q.s. to 1 oz. of wintergreen water." Dr. Root has a representative in London, but we have no special information as to his dealings.

96/25. *J. F. F.*—The resin which you send is a kino-like body of weak astringent power. Such resins are very abundant in the market, and we cannot recommend the importation of this one into this country.

113/61. *C. G.*—Sealing-wax in "square" sticks is cast in metal moulds while soft. The moulds may be made of tinned iron, with strips of tin to form the divisions, on a similar principle to that of pill-cutters.

113/57. *D. S. R.*—We do not have a formula for the preparation.

111/12. *Viridis* has added some iodine to Salicylated Collodion (containing ext. cannabis indicæ), and it has become ropy and unfit for use, either failing to restore it to service. Iodine itself does not appear to have any effect upon collodion, and the ropiness is no doubt due to the action of the haloid upon the other constituents. It will be an exceedingly difficult matter for *Viridis* to utilise the quart of the preparation which he has spoilt. The ether may be recovered by distillation, but the other ingredients cannot be isolated without considerable trouble and expense.

211/59. *Lack*.—Milk Analysis.—The simplest method for determining the total solids of milk is to evaporate a weighed portion—say 100 grains—in a tared platinum basin to complete dryness, which takes several hours. Then weigh the dish and its contents, and subtract the weight of the dish from the total weight, the result being the percentage of total solids. The residue should now be carefully scraped out of the basin, reduced to powder, and washed with absolute ether until the washings cease to leave a fat stain when dropped upon a piece of blue writing-paper. The residue should again be dried and weighed, the result being the percentage of solids not fat, and the difference is fat. The whole operation is not quite free from difficulty; for example, it is exceedingly difficult to dry the solids, and once they are dry they do not powder easily. Moreover, much ether is required to wash out the fat, except the solids be powdered with a little glass, or a continuous percolator is used. For details as to the means for overcoming these difficulties, *Lack* should consult Wanklyn's "Milk Analysis," or similar works.

1/4. *T. T.*—Butter Colouring.—The surest way of making a good oleaceous preparation is to exhaust roll annatto of its colouring matter by double maceration in methylated spirit; filter and evaporate the tinctures and dissolve the residue in solution of sodium carbonate, which dissolves the colouring resin. The latter can now be precipitated by the addition of sulphuric acid to the solution. Collect on a filter, wash, dry, and dissolve in cotton-seed oil.

113/17. *H.*—We fear that the brilliance of the polished steel ornament has been destroyed by the hypochlorous fumes, but you might try the effect of rubbing with emery powder and oil.

114/6. *M.*—Children's Hair Lotion (non-poisonous).—The basis of this should be quassia, as stavesacre, a much more active parasiticide, is poisonous. The following is a good formula:—

Sulphate of quinine	..	..	..	10 grains
Acetic acid	..	..	..	1 oz.
Glycerine	..	..	..	2 "
Concentrated infusion of quassia	..	..	..	8 "
Eau de Cologne	..	..	..	1 "
Rectified spirit	..	..	..	1 "
Water to	..	..	..	20 "

Mix, and filter bright.

114/39. *Brilliant*.—The production of "a clear white flame without smoke, smell, or residue" by the combustion of gaseous hydrocarbons is impossible. Whiteness varies in degree with the amount or nature of incandescent or solid particles in the flame. Thus, the Albo-Carbon light (a pure white flame) is produced by passing the coal gas through naphthalene; its smoke is white. The Welsbach light owes its whiteness to the presence in the flame of a hood composed of earthy oxides. Either of these may suit you.

113/60. *Apothecary*.—(1) The medical profession does not appear to have given any definite expression of opinion regarding the value of glycerine tinctures; indeed, pharmacists (who have given most attention to the subject) have never agreed that it is an efficient substitute for alcohol. The United States Pharmacopœia contains five tinctures in which glycerine is used along with alcohol and water, the object being to prevent precipitation. Glycerine tinctures are used in the London Temperance Hospital. (2) *Tinctura Opii Aquosa* is made of the same strength as the pharmacopœial tincture with 5 oz. of glycerine and 15 oz. of boiling water. We do not know of any other method. (3) You might try the Eastman gelatine film, which can be transferred, after the print is finished, to any surface. (4) A 2 per cent. solution of hydrofluoric acid acts upon glass. The solution is made with distilled water. (5) As the active principles of ergot are soluble in water, a fluid extract of ergot made with glycerine and water should be reliable. The fluid extract of the United States Pharmacopœia does not contain glycerine. A preparation such as you require may be made as follows:—Moisten 1 lb. of powdered ergot with a sufficiency of a mixture of 4 oz. of glycerine, 2 drachms of acetic acid, and 8 oz. of water. After standing two hours, pack in a percolator and close the orifice. Allow to macerate for forty-eight hours: then add the rest of the menstruum, and continue percolation with water until 10 oz. of percolate are obtained. Reserve this portion. Continue percolation with water until the drug is exhausted, and evaporate the percolate to 6 oz., which dissolve in the reserved portion. (6) The preparation of ammonio-citrate of cerium is covered by a patent, hence its comparatively high price. It is much more soluble than the oxalate, and upon that fact is based its alleged superior therapeutic properties. There is no reference to the salt in standard medical works, so that we must refer you to the advertisements of the patentees for the opinions of "the profession" regarding it. (7) Sage tea is not now used in regular medical practice. (8) Bullock's blood has never come into general use.

51/115. *J. H. W.*—The most convenient way to obtain Oxygen for Inhalation is in the form of the compressed gas as prepared by Brin's patent. The decomposition of peroxide of hydrogen would be much more expensive.

Information Wanted.

[Replies to the following requests are solicited by correspondents of THE CHEMIST AND DRUGGIST.]

22/104.—Maker of Chamberlain's poultry food.

18/114. Dealer in sunflower seed.

4/1. Formula for Dr. Marshall Hall's digestive pills.

113/27. Composition of white wax used by fly-hook dressers.

116/17. Formula for tinctura passifloræ.

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MANUFACTURERS OF SCHERING'S

PURE CHEMICALS

PARTICULARLY OF

ACID, GALLIC	Almost white needles	Freely and entirely soluble in alcohol or water
" PYROGALLIC	Bi-sublimed, white, bulky	Ditto ditto ditto.
" SALICYLIC (Kolbe's)	White, powder, crystallised and dialysed	Dissolves colourless in water or alcohol; purest for medicine.
" TANNIC	Lightest crystals	Dissolves almost colourless in water, alcohol, and ether.
" "	Powder and granulated	Dissolves freely in water, alcohol, and ether.
ALLOIDINE (Patent)	Gelatine plates... ..	Purest Pyroxylin; inexplusive.
CHLORAL HYDRATE	White cake and crystal	See Liebreich's, below.
CHLORAL HYDRATE (Liebreich's)	Transparent rhomboidals (facsimile of Dr. Liebreich's)	Will not decompose by age.
COTON CHLORAL	Shiny crystalline scales. (Powder form most objectionable)	Free from foreign chlorides.
GLYCERINE... ..	S.G. 1260, double distilled, brilliantly white, odourless; also lower S.G. and qualities	Free from lime, chlorides, metals; will stand severest chemical tests.
IODINE	Resublimed, fine scales	Purest.
IOOFORM, Absolut.	Crystals and powder of soft touch...	Purest; made by electrolysis.
PRALDEHYD ... ..	... ..	Absolutely purest.
POTASS. BROMIDE	Fine white dry regular crystals ...	Perfectly free from iodide, and the most free from chloride.
" PERMANGANATE	Large and small crystals	Chemically pure.
" IODINE	Fine white dry regular crystals ...	Apply Barytic and other tests. This will never change colour.
SODIA SALICYLATE, and other Salicylates	White powder and crystals	Freely soluble in water and alcohol.

H. FINZELBERG, of Andernach-on-Rhine.

ERGOTINE, pure Dialysed ...	Brown colloid, purified by Dialysis	Free from all saline matter present in the ordinary Ergotine and extracts.
FERRUM OXYD. (5% Dialysed)	Transparent brown liquid, purified by Dialysis	Free from all saline matter. Diluted by ten times its weight of water, will stand the test of Nitrate of Silver.
PEPSIN PORCI (100%)	White, sweet, odourless powder ...	Freely soluble in water, not hygroscopic, and will not deteriorate; will dissolve (by Wittstein's test) 100 parts of white of egg and 250 parts of fibrine.

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[SILVER.]

PHILADELPHIA, 1876



[HIGHEST AWARD.]

LONDON, 1885.



[GOLD.]

PARIS, 1885



[GOLD.]

LIVERPOOL, 1886.



[GOLD.]

ADELAIDE, 1887.



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N.B.—We guarantee our Chloroform prepared from METHYLATED SPIRIT to be PURE CHLOROFORM, answering all the tests of the British Pharmacopœia.

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4/6..Alcool de Menthe Ricqles	41/5	4/6..Capsules Matico	36/	2/3..Guyot's Goudron	18/	7/0..Rabuteau's Elixir Ferrug.	65/
2/9 .. Ditto ditto	21/8	4/6.. " Raquin	36/	11/..Laville's Gout Tincture	91/10	2/9.. " Sirop	24/
2/9..Aubergier's Syrup	26/3	4/6.. " Mathy Caylus	27/	11/.. " Pills	91/10	4/0..Racahout	31/
2/9.. " Pâté	15/4	4/6..Chassaing's Wine	38/9	2/3..Papier Fayard	13/6	4/6..Reynal's Bongies	37/10
6/6..Bay Rum	57/	2/9.. " Pills	24/	1 1/2 .. Ditto	7/3	2/9..Ricord's Injection	24/
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1/9.. " Lozenges	14/5	3/.. Ditto	24/	1/9..Pâté Aubergier	15/4	1/6..Star Paper	11/
4/6..Blancaud's Pills	32/5	2/6..Espec's Cigarettes	13/6	1/9.. " de Berthé	15/4	2/9..Vallet's Pills	22/6
2/6.. Ditto	18/	6/..Elixir de Coca	56/9	2/9.. " de Coca	24/4	1/9.. Ditto	14/5
8/..Bron's Injection	27/	2/..Flon's Syrup	22/6	1/9.. " de George	14/5	4/6..Veloutine (White, Pak, Yel)	37/10
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Tasteless Coated Pills.

Soluble in cold water.

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Soluble Essences of Ginger, Lemon, &c.,

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FOR FATIGUE OF MIND AND BODY.

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Particularly useful in Hot and Enervating Climates.

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 dash of water. Ambrecht's Coca Wine has a similar
 effect in reviving & restoring the exhausted energies of
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 I am, Sir, Yours faithfully,
 Edward Allen
 Lecturer on Anatomy & Physiology
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THE RETAIL PRICE OF THIS WINE IS

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Coca Champagne Quarts	-	56s. per doz.	} Labelled Vin mousseux de Coca très sec.
Coca Champagne Pints	-	33s. „	

For sleeplessness this Wine is almost always successful, and superior to Opiates,
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THE ORIGINAL AND ONLY GENUINE.

IMPORTANT CAUTIONS

From Lord Chancellor SELBORNE, Vice-Chancellor Sir W. PAGE WOOD,
and the LORDS JUSTICES OF APPEAL.

VICE-CHANCELLOR SIR W. PAGE WOOD, by whom the suit in Chancery was first heard, stated in his judgment that 'Dr. J. Collis Browne was undoubtedly the Inventor of Chlorodyne, that the whole story of the Defendant Freeman was as deliberately untrue as the falsehood he had deposed to with reference to the use of his Chlorodyne in the Hospital.'

he VICE-CHANCELLOR also stated, 'that Chlorodyne was a fanciful name, and had application been made sooner, the Court would have given Dr. Browne protection.'

ORD CHANCELLOR SELBORNE coincided with the judgment of the Vice-Chancellor upon this point, and stated 'that had application been made at a proper time and place, the Court would have found means to restrain the Defendant from misrepresenting the decision of the Vice-Chancellor.'

ORD JUSTICE JAMES, on appeal, stated in his judgment, 'that the Defendant Freeman had made a deliberate misrepresentation of the decision of Vice-Chancellor Wood.'

was proved in Court, on affidavit by Mrs. Forbes, of Paris, that the testimonial published in the *Times*, November 14th, 1865, speaking of the great efficacy of Chlorodyne in Cholera, referred to Dr. J. Collis Browne's Chlorodyne, and that she never used any other, that she had written to the Defendant Freeman to that effect; notwithstanding which notice the Defendant publishes the said testimonial as referring to his medicine.

The Editor of the *Medical Times*, in his report on Chlorodyne, January 13th, 1866, gives information that the Chlorodyne referred to was the medicine introduced by a retired Army Medical Officer, which was Dr. J. Collis Browne; still this is published by the Defendant as testimony to his medicine.

Numerous affidavits from eminent Physicians and others were produced in Court, stating that Dr. J. Collis Browne was the inventor of Chlorodyne, and that when prescribing they mean no other.

The Defendant himself publishes that his compound is in effect and composition quite different to any other preparation; nevertheless he assumes the name, testimonials, &c., of Chlorodyne.

Technicalities in law prevent that protection which the public should justly have against such a course of conduct. It is now incumbent on all who purchase Chlorodyne to see that the name, 'Dr. J. Collis Browne's Chlorodyne,' is engraved on the Government Stamp, as it is not sold otherwise. All other compounds under the name of Chlorodyne are spurious. All attempts at analysis have failed; hence the statement that the constituents of Chlorodyne are known is a misrepresentation.

ORIGINAL AND

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The subjoined list of eminent Firms concur with Vice-Chancellor Sir W. Page Wood's statement in Court, that Dr. Collis Browne was undoubtedly the Inventor of Chlorodyne; and that when Chlorodyne, or the Original Chlorodyne, is ordered, they invariably supply Dr. J. Collis Browne's:—

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Barron, Harvey & Co.,	London	Gratton & Co.,	Belfast	Peake, Allen & Co.,	Dublin
Bell, John, & Co.,	"	Grimwade, Ridley,	London	Raines & Co.,	York
Bourne & Taylor,	"	Grindley & Son,	Chester	Raines & Co.,	Edinburgh
Corbyn & Co.,	"	Hearon, Squire & Francis,	London	Sang & Barker,	"
Cox & Gould,	"	Hodgkinson, Tonge & Stead,	"	Sanger, J., & Sons,	London
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Calcil Sulphid. $\frac{1}{10}$, $\frac{1}{8}$, $\frac{1}{4}$, $\frac{1}{2}$, 1 gr.	1/8	Ferruginous (Bland's), 3 and		Phosphorus, $\frac{1}{80}$ Ext. Nuc.	
Cascara Sagrada (Ext.), 2 gr.	2/-	5 gr	1/8	Vom., $\frac{1}{4}$ gr.	2/-
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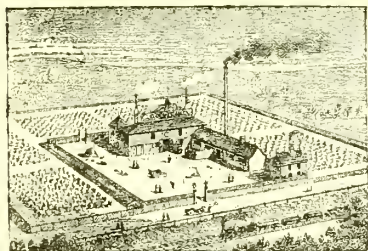
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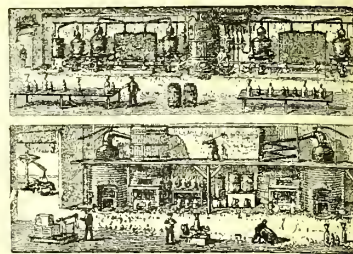
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THE ONLY ABSOLUTELY
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SLEEPLESSNESS

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Guaranteed to contain no Opium, Morphia, Chloral, or other injurious Narcotics; no Bromide, no Alcohol; does not disturb the brain nor depress the heart. Price 2s. 9d. and 4s. 6d.

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Read an Epitome on the Causes and Cure of Sleeplessness, &c., containing Medical and other Testimonials, and Analyst's Certificate (published by the above), price 6d. Given away with every bottle.

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Manufacturers of Acids, Æthers, Sp. Æther. Nit., Sp. Ammon. Arom., Liq. Ammon., Soldering Solution, &c., and preparations of Alum, Animal Charcoal, Antimony, Baryta, Bismuth, Strontia, Zinc, &c.

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FOX'S SPECIALITIES, IN USE NEARLY TWENTY YEARS.

"PALATABLE" COD LIVER OIL.

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"KIDNEY AND BLOOD MEDICINE."

"OLD ENGLISH LINIMENT."

WILL STAND ANY CLIMATE.

Please, to the taste. Specially valuable for delicate women and children. Recommended by the most eminent physicians, and used in the leading Hospitals in the United Kingdom. See Medical opinions.

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PURE ACETIC ACID.

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CHIMISCHE FABRIK HOCHSPEYER,

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THE FIFTH DECADE OF

"THE MOTHER'S FRIEND"

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Morton's Powders for Children of all Ages,

Especially in Teething, Fits, Convulsions, Worms, Measles, Scarletina, Hooping Cough, Croup, Difficulty of Breathing, and all Febrile Attacks.



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Upwards of Forty Years of unparalleled success have gained for this fine Alternative Medicine the highest approbation of every family into which it has been introduced. "THE MOTHER'S FRIEND" Powders have also been extensively used and proved to be very valuable for ADULTS, since they remove all oppressive accumulations on the Chest, regulate the secretions of the Liver, Kidneys, and Bowels, and by purifying the Blood improve and invigorate the health.

Prepared only by HENRY MORTON, Pharmaceutical Chemist, and sold Wholesale and Retail at his Pharmacy, THE ELMS, RAMSGATE.

In Boxes (containing full directions), at 1s. 1d., 2s. 9d., and 4s. 6d. each; Postage 1d.; and may be obtained from the London Wholesale Agents by all Chemists and Medicine Vendors.

N.B.—H. MORTON finds it needful to call especial attention to his Registered Title "THE MOTHER'S FRIEND," together with the Registered Device which distinguishes his Proprietary Medicines. A Maltese Cross with the letters H.M.R.K. enclosed in a diamond, and which, as well as the title "THE MOTHER'S FRIEND," cannot be infringed with impunity.



HAWLEY'S RED BARK BITTERS.

From the best Indian Red Cinchona Bark, Flavoured.

In tall hock-shaped, white glass bottles, capsuled. Two sizes. Handsome coloured label in the front. Plain label with directions at the back.

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Introduced to the Trade in 1875.

CAN BE RETAILED WITHOUT A WINE LICENCE.

This Wine is made from selected Green Leaves, and contains all the active ingredients of the plant, the Cocaine and the Ozonine being both held in solution.

In 6/0 Bottles (2,000 Leaves) 57/ dozen.

In 3/6 „ (1,000 „) 33/ „

EVANS, LESCHER & WEBB,

60 Bartholomew Close, LONDON.

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EVANS, SONS & CO. EVANS, SONS & MASON.

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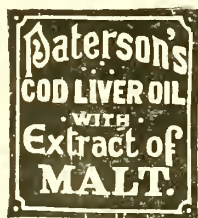
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AS SUPPLIED TO THE INFIRMARIES

A CAREFULLY PREPARED EMULSION OF

PUREST COD LIVER OIL

WITH MALT EXTRACT.



Pronounced by leading Physicians to be the most valuable form of Cod Liver Oil ever produced. It is pleasant to take, and has no fishy smell or taste. There is no nausea experienced and it is greatly relished by Children and Invalids.

This valuable combination forms a

HIGHLY NUTRITIOUS FOOD.

It is many times more strengthening than any other form of Cod Liver Oil, and is simply invaluable for bringing the system up to par in all cases of Consumption and Wasting Diseases and General Debility.

The moderate price—

1s. 6d., 2s., and 3s. per Bottle, brings it within the reach of all.

GUARANTEED PURE.

PATERSON'S MANUFACTURING CO., LIM.

Manufacturing Chemists,

GLASGOW and LONDON.

Head Office: 12 BROOMIELAW, GLASGOW.

REPORT

ON

COLEMAN'S LIEBIG'S EXTRACT

OF

MEAT AND MALT WINE,

By FRANCIS SUTTON, Esq., F.C.S.,

Public Analyst for the County of Norfolk, &c.

FRANCIS SUTTON, ESQ., F.C.S.,

Analytical and Consulting Chemist,
Author of Handbook of Volumetric Analysis,
Chemist to the Norfolk Chamber of Agriculture,
Gas Examiner for the City of Norwich.

NORFOLK COUNTY ANALYSTS

OFFICE,

LONDON STREET, NORWICH,

July 25th, 1888.

I hereby certify that I have made an exhaustive analysis of the Meat and Malt Wine prepared by Messrs. Coleman & Co., Limited, Norwich, with a view to determine chiefly whether it really contains an appreciable quantity of Meat Extract, and whether it is entitled to be classed as a suitable dietetic stimulant for invalids. The result of my analysis proves that it does contain a suitable proportion of all the most valuable principles contained in Liebig's Extract of Meat. It is well known to physiologists that this extract is not valued for the ordinary albumenoids (such as gelatine and albumen), which are, indeed, excluded to a large extent by the process of manufacture, but that its chief value, as shown by Baron Liebig himself, consists in its containing these essential principles peculiar to flesh, and which have a remarkable restorative power over the nervous system of invalids, thus rendering Liebig's Extract famous. In addition to these valuable substances the wine also contains a considerable quantity of Malt Extract, which is also well known and appreciated as an excellent restorative in cases of debility.

In addition to this the wine is of pure, natural quality, free from sophistication.

As witness my hand,

(Signed)

FRANCIS SUTTON,

Public Analyst for the County Norfolk, &c.

SULPHATE OF QUININE

(GOLD AND SILVER BRAND)

QUININE FACTORY AUERBACH

(DR. SEYFERTH).

Certified by Professor Fresenius, of Wiesbaden, as equal to the best preparations of other marks.

DEUTSCHE GOLD AND SILBER SCHEIDE ANSTALT

(VORMALS ROSSLER),

FRANKFORT-ON-MAINE.

CYANIDE OF POTASSIUM,
IODIDE OF POTASSIUM,
BROMIDE OF POTASSIUM,
NITRATE OF SILVER,
CHLORIDE OF GOLD,
SULPHOCYANIDE OF BARIUM,
PHOTOGRAPHIC and PHARMACEUTICAL PURPOSES, of the

IRON Reduced by HYDROGEN,
TARTARIC ACID,
HYDROCHINON,
STRONTIA,
MAGNESIA, and ALL OTHER
CHEMICALS for
Best Quality.

Sole Agents—OSCAR ANDREAE & CO.

26 Great Tower Street, LONDON. E.C.



Licensed by Her Majesty's Government.

Embracing the Therapeutic properties of the Coca Plant, blended with the best Madeira.

IN England, medical men prescribe its use in preference to Quinine, or any Bark Wine. It may be used with safety at all times, and for any length of time, without injury to the gastric membrane. It may be taken in place of Liquors and Dessert Wines, which it certainly surpasses in flavour. *It is a direct stimulant of the most active kind, supporting life in a manner almost miraculous, without disturbance of the vital functions.* For the voice, a wineglassful before any ordeal is sufficient. Its effect upon the vocal chords is surprising, and of great value to Public Speakers, Professional and other Singers, and Lecturers.

Sold in Bottles, 40s. per dozen Retail.

FRENCH HYGIENIC SOCIETY, 56 CONDUIT STREET, REGENT STREET, LONDON,
UPON RECEIPT OF A FULL REMITTANCE.

COCA TOBACCO AND CIGARETTES.

SUPREMELY DELICIOUS! MOST EXQUISITE AROMA!

ABSOLUTELY FREE FROM NICOTINE.

Licensed by Her Majesty's Government.



THE above preparation of Dr. NACHTIGAL, M.D., is pronounced by the members of the Medical Profession to be a stimulant, tonic, and restorative to the system. In the shape of Tobacco and Cigarettes the smoke difficulty is overcome—all may enjoy their smoke with benefit to health. Any amount of muscular labour and mental exertion may be undertaken without the usual fatigue by those who smoke the above. It is much used by Bicyclists and Athletes generally, and all speak most favourably of it. From the Report of the Bavarian Army Corps, the officers and men of which used it during their severe labours in the heat of June and July, it is spoken of in the most flattering terms of satisfaction and commendation in every way, and as highly beneficial to the men who used it when on night service.

THE CHEMIST AND DRUGGIST (January 29th, 1883) says :—Tobacco smoking is so universal nowadays that some people regard it as a necessity rather than a luxury. If there are two opinions as to that, there cannot be regarding the fact that tobacco, even when smoked in moderation, does an infinite amount of harm to boys and adults who are not of robust habits; if used in excess by anybody bad results assuredly follow. Various substitutes for tobacco have been introduced from time to time, but with little success because of their "brown-paper" taste and non-satisfying results. This, however, will not, we think, be the verdict regarding the coca tobacco invented by Dr. Nachtigal, of Stuttgart; first, because of its appearance, which resembles "York River" very closely, second, because of its pleasant taste, and, lastly, because the smoker feels that he *has* had a smoke after a pipeful of it. The same applies to the cigarettes. The coca tobacco does not contain nicotine, and depends for its invigorating properties upon the coca leaf. The tobacco and cigarettes are being introduced in this country as a specialty saleable by chemists and they are sure to sell readily. The French Hygienic Society, 16 Conduit Street, W., are the consignees.

Inventor—Dr. NACHTIGAL, M.D. (late Staff-Surgeon German Army).

Sole Licensed Manufacturer—Mr. OSCAR FRIEHMELT.

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THE FRENCH HYGIENIC SOCIETY, 56 CONDUIT ST., REGENT ST., LONDON.

PRICES REDUCED.

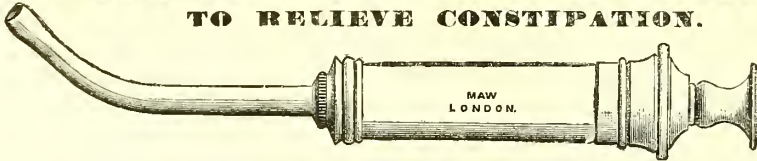
CIGARETTES, Sanitary, fully charged with Coca	2/	per packet of 20.
" " " "	8/	100.
" " " "	£3 6/8	per 1,000.
" No. 1, moderately charged with Coca.....	2/	per packet of 20; 8/ per 100.
" " " "	£3 6/8	per 1,000.
" No. 2, mildly charged with Coca	1/6	per packet of 20; 6/ per 100.
" " " "	£2 12/8	per 1,000.
No. 1.—Mild "Smoking Mixture, 12/ per lb.	No. 2.—Strong Smoking Mixture, 12/ per lb.	

FRENCH HYGIENIC SOCIETY, 56 CONDUIT STREET, REGENT STREET, LONDON,
UPON RECEIPT OF A FULL REMITTANCE.

Each of the above can be obtained through Messrs. Kemp & Co. (Lim.), Bombay, or direct from the Consignees, the French Hygienic Society, 56 Conduit Street, Regent Street, London, upon receipt of a full remittance.

IMPROVED SYRINGES

FOR THE
INJECTION OF GLYCERINE
TO RELIEVE CONSTIPATION.



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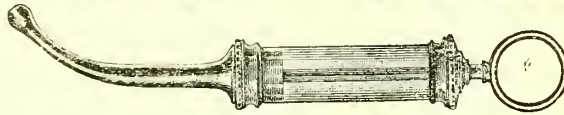
PEWTER, 8/ per dozen; PEWTER, with Glass Barrel, 12/ per dozen; VULCANITE, 30/ per dozen;
VULCANITE, with Glass Barrel, 30/ per doz.; CELLULOID, with Glass Barrel, 42/ per doz.

S. MAW, SON & THOMPSON, ALDERSGATE ST., LONDON.

GLYCERINE SYRINGES.

Pewter, 7/6.

Vulcanite, with glass
barrel, 18/-



All Vulcanite, 21/-
Vulcanite, with straight
points, 13/6 per doz.

BATHING CAPS

In great variety at 5/-, 6/-, 7/6, 9/-, 12/6, 13/6 per dozen.

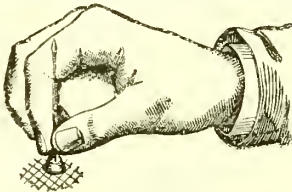
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Tubes, 3s. each; Half Tubes, 1s. each. Pomade in vials, 5s.
HUMAN VACCINE, from healthy children only, microscopically examined and
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Points, 5s. Tubes two-thirds full (same as those mentioned above, but without
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dozen. Vaccinations daily, between the hours of 12 and 3, by the Consulting
Physician, at the uniform fee of a guinea. P.O.O.'s (including postage, and crossed
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EDWARD DARKE, Secretary.

Office hours, 10 to 4; Saturdays, 10 to 2.

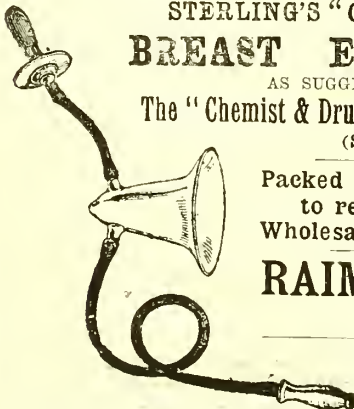
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BREAST EXHAUSTER,
AS SUGGESTED IN

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Packed in Cardboard Boxes
to retail at 1s. each.
Wholesale, 7s. per doz. net.

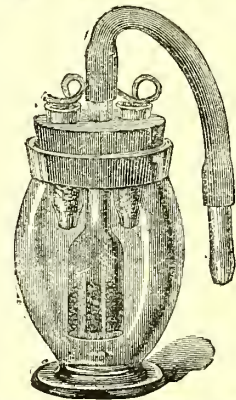
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NEW PATENT
CHLORIDE OF AMMONIUM

CATARRHAL
THROAT
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EAR
AFFECTIONS.



LOSS of
VOICE,
BRONCHIAL
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HAY FEVER.

I N H A L E R

YIELDS a plentiful cloud of Neutral Vapour with little
effort on the part of the patient.

Illustrated Prospectus, with the "History of Chloride of
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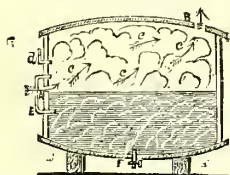
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PATENT AUTOMATIC PILL PICKING MACHINE.

All kinds of Pills Picked and Sorted with
QUICKNESS, ACCURACY, and ECONOMY.
Hand-picking dispensed with, and the finished sample much
improved. All Pills *above* or *below* the Standard size and all
imperfect in shape rejected.

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NEW METHOD OF MAKING VINEGAR,
BY THE REVOLVING APPARATUS
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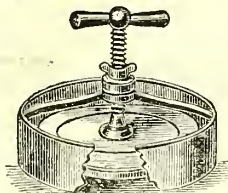
For further particulars

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(DELF'S PATENT).



PRICE 6/6 EACH.

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"DESIDERATUM"
(TRADE MARK)
ON EVERY MACHINE.

For Descriptive Price Lists and Testimonials
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DISPENSING BOTTLES & PHIALS

The following are our greatly Reduced Prices:—

CLEAR BLUE TINTED.

3 and 4 oz.	6/6 per gross.	12 oz.	11/6 per gross
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Prompt attention to country orders. Packages 1/ each, allowed for if
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GLASS BOTTLE MANUFACTURERS,

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CARBOLIC POWDER (PINK) in 1 Cwt. 2 Cwt. CASKS 1 lb & 1/2 Packages

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CARBOLIC FLUID in 6 1/4 & 1/6 STOPPERED BOTTLES

CARBOLIC SOAP No 1 & No 2

CARBOLIC & GLYCERINE SOAP in 4 lb & 1 lb TABS

SAFE FROM POISON
PREEABLE IN SMELL.

THE GOVERNMENT SANITARY CO.,

TO BE HAD FROM ALL
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MARTMANN'S HYGIENIC WOOD WOOL DIAPERS

Used in all the Principal Hospitals and Recommended by the Medical Profession.

For Home Use, Delicate Health, Accouchement, and for Ladies Travelling, they are *invaluable and indispensable*. They are Soft, Light, Antiseptic, and
are supplied at the Actual Cost of Washing. Supplied by Chemists, Ladies' Outfitters, and Drapers.

Advertised at 1/- and 2/- per dozen. To Chemists, 9/6 and 19/- per gross. Pamphlets and Showcards on application.

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THE HUSK & SCOUR
IN LAMBS & CALVES
CURED BY
THE DEVONSHIRE
COMPOUND.

A distinct preparation
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sovereign remedy which
never fails to cure this
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1 Bottle, 2/-

ESTABLISHED
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FOR CATTLE
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Both
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CORNER'S PINE'S



DEVONSHIRE OILS

SOLD
EVERYWHERE

THE GREAT
REMEDY
FOR ACCIDENTS
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WOUNDS

Supplied
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Houses

PRICE 2/-

CORNER'S FAMILY
EMBRICATION
SHOULD BE USED
ON THE CHEST FOR
MEASLES.

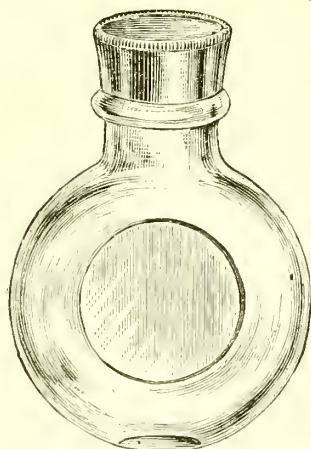
Cures Sore Throats, Colds,
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Rheumatism, Lumbago,
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SEE THOUSANDS OF
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For Beauty, Cheapness, and Efficiency R. H. BARRETT'S

WATCH SMELLING-SALT BOTTLES

EXCEL ALL OTHERS IN THE MARKET.

The Caps are all fitted with INDESTRUCTIBLE WASHERS, to resist the action of Ammonia and retain the strength of the Salts.

Price, assorted white and coloured, 10/6 per gross (in 5-gross lots).

Chemists' and Perfumers' Bottles in great variety, Plain or Stoppered

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PATRONISED BY HER MAJESTY.

BARBER'S ORIGINAL CRIMSON MARKING INK,



WHICH IS CHANGED BY HEAT TO A JET BLACK.

Put up for Retail Sale in 6d., 1s., 2s., 2s. 6d., and 5s. Bottles.

Also Barber's Concentrated Liquid COCHINEAL, for Colouring Jellies, Custards, &c.

Put up in 6d. and 1s. Bottles.

MANUFACTURED ONLY BY THE PROPRIETORS—

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BOORD & SON, RECTIFYING DISTILLERS & WINE MERCHANTS,

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OFFER LOWEST QUOTATIONS, ON APPLICATION, FOR

FINEST RECTIFIED SPIRITS OF WINE

Methylated Spirit and Finish; Finest Orange Wine, Sherries,
and Malagas for Medicated Wines.

BURROUGHS
Spiritus Rectificatus, P.B.

SPIRITS
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12 galls. 50 o.p. at
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The BEST English Grain Spirit.
Free from Fusel Oil.
Chemically Pure.
Special Quotation for Quantity.

ORANGE
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AT LOWEST PRICES.

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FROM RATCLIFF.

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EXTRAORDINARY CHEAP LINE!!! THE WATCH SMELLING-SALT BOTTLE

PLAIN OR FLUTED.

These Bottles are fitted with BEST SCREW NICKEL CAPS, lined with Washers, and are the most wonderful value ever offered. A trial order will prove this fact.

PRICE, IN BEST WHITE FLINT OR ASSORTED COLOURS, **12/-** PER GROSS, in not less than 1 gr. lots.
SPECIAL QUOTATIONS for Orders of FIVE GROSS and upwards.

E. A. HEARN & CO., Manufacturers of Glass Bottles of every description,

381-3 KINGSLAND ROAD, LONDON, E.

The annexed Illustration shows exact size of above-mentioned Bottle.



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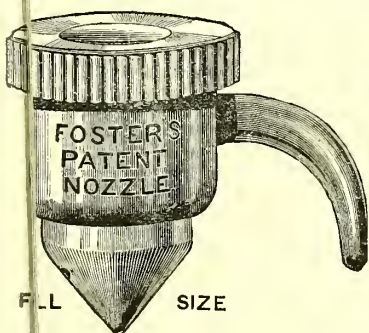
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For Converting Syphon Bottles immediately into

FIRE EXTINGUISHERS.

In Fancy Boxes containing 1 doz. Nozzles, 18/- each. Trade Discount, 33 $\frac{1}{3}$ per cent.
Handsome Showcard and Handbills given gratuitously.

Every room in every house should have a Syphon Bottle fitted with a Nozzle, ready for immediate use. It forms the Simplest and most Reliable Fire Extinguisher ever invented.



Price 1s. 6d. each.

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"Niagara Works," 26^T Eagle Wharf Road, LONDON, N.

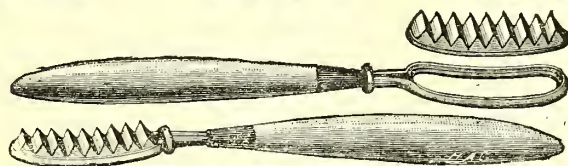
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A GREAT NOVELTY IN TOOTH BRUSHES.

Prevents decay, soothes the gums, and polishes the teeth, which no other Brush can excel.

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Assorted Bone and Horn, with Nickel-plated Imperishables, 11/- per dozen.

BOXES OF FELT,

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An Attractive Show Card given with each Dozen.

PURE SPIRITS OF WINE.

60 o.p., 20/3 per gall.; 56 o.p., 19/9 per gall.

1/ per Gall. Discount for Cash with order.

Further allowance for quantity. STEAM STILL ONLY.

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"No Gamekeeper or Poultry Breeder should be without them."—*Land and Water.*

WALTON'S ROUP PILLS AND TONIC PASTE

For the certain Prevention or Cure of Roup, Gapes, and ALL Diseases of Game, Poultry, Pigeons & Cage Birds.



These thoroughly reliable remedies are now so well known and appreciated, gaining a sale and reputation altogether unparalleled in the history of Game, Poultry, and Pigeon Medicines, and promise such an increasing demand as to warrant the Trade generally in keeping them constantly in Stock. A list of specimens of Testimonials, including the names of most of the principal breeders in this country, sent free on application to the Proprietor, whose Signature and Trade Mark are engraved upon the Labels of every Box and Tin of the genuine articles.

Prices—Roup Pills, 6d., 1/-, 2/-, 4/-, and 10/- per box. Tonic Paste, 6d., 1/-, 2/6, 5/-, and 10/- per tin.

The Trade treated liberally. Of all Wholesale Houses, or supplied direct by JOHN WALTON, CROYDON, near LONDON.

FOR CLEANING PLATE

BRADLEY & BOURDAS'S
ALBATUM or WHITE ROUGE
For Cleaning Gold, Silver, and Plated Goods.

Since its introduction as a substitute for the ordinary Rouge, a quarter of a century ago, the sale has amazingly increased both at home and abroad. A trial is only needed to prove its superiority over other plate powders in use. Sold in Boxes at 1s. and 2s.; Tins, 6s. 6 Pont Street, Belgrave Square, and 48 Belgrave Road, London, S.W.

BY APPOINTMENT
TO H.R.H.

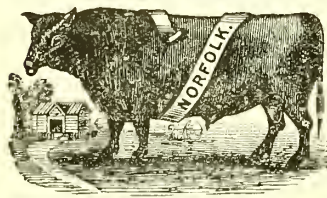
BIGG'S THE LATE PRINCE CONSORT. SHEEP AND LAMB DIPPING COMPOSITION,

FOR DESTRUCTION OF TICKS, LICE, &c., AND PREVENTION OF FLY.

Has now been used with Greatest Success for nearly Half a Century. Pamphlets on application.

LEICESTER HOUSE, GREAT DOVER STREET, BOROUGH, LONDON.

THE "NORFOLK" VETERINARY REMEDIES are the result of 40 Years' large practice,



And have an enormous sale in virtue of their superior quality and moderate price. Used on the Royal Farms, and by thousands of Cowkeepers, Flockmasters, and Farmers in the kingdom. The leading Remedies are The "NORFOLK" CONDITION DRENCHES for Cows, Bullocks, or Sheep; a sure preventive of Fever, Blood Diseases, and ordinary ailments; 9s. per dozen, 3 dozen 22s. 6d. The "NORFOLK" CORDIALINE, or PAIN KILLER, the most powerful Restorative known for Horses, Cattle, or Sheep in Colic, Calving, Lambling, &c.; 12s. per dozen, or 3 dozen 31s. 6d. The "NORFOLK" RED WOUND OILS, a rapid and sound cure for all Kicks, Cuts, Accidents, &c.; 3s. 6d. per pint, or 36s. per dozen. The "NORFOLK" BROWN SPRAIN OILS, for Lameness, Old Swellings, Rheumatism, &c.; 3s. 6d. per pint, or 36s. per dozen. Usual discounts to the Trade, and special terms for Shipping Orders. Manufactured for the Proprietor only by

F. SUTTON & CO., Chemists, NORWICH, ENGLAND.

PINE'S DEVONSHIRE OILS

PRICE

1 dozen,	13/6	Per doz. net in
3 "	12/6	Wine Bottles.
6 "	11/6	CARRIAGE PAID.
12 "	10/6	Single Sample
		Bottle, 1/9.

58

FOR HORSES, COWS, SHEEP, AND LAMBS.

THESE CATTLE OILS are prepared from the Original and Valuable Recipe of WILLIAM YOUATT PINE, and are unsurpassed, their great sale being a sufficient guarantee of their EXCELLENCE.

PREPARED AND SOLD WHOLESALE BY

WALTER GREGORY, 31 Fore Street, WELLINGTON, SOMERSET.

W. H. B. REFINED
W. H. B. WHITE

BEESWAX.

Bernard Dyer, B.Sc. (Lond.), F.C.S., F.I.C., Analytical and Consulting Chemist.

LABORATORY, 17 Great Tower Street, London, E.C., Nov. 25, 1886. I have analysed a cake of Wax stamped W.H.B. sent to me by a London House on behalf of Messrs. W. H. Bowdlear & Co. of Boston, Mass., U.S.A. It consists of pure bleached beeswax unmixed with paraffine, fat, or other of the various materials with which beeswax, and especially white wax, is commonly adulterated.

Bernard Dyer, B.Sc., F.C.S., F.I.C., Member of the Society of Public Analysts.

CABLE ADDRESS—"BOWDLEAR BOSTON."

Our goods may be obtained in single case lots of any of the leading Wholesale Druggists in the Northern and Midland Counties, and of LOFTHOUSE & SALTHER, Hull; COLTHURST & HARDING, Bristol; GOODALL, BACKHOUSE & Co., Leeds; GLASGOW APOTHECARIES COMPANY, Glasgow; OLDFIELD, PATTINSON & Co., Manchester.

We will deliver our Goods in 5-cwt. lots ex quay, in any City which is the Terminus of a Steamship Line throughout the Kingdom.

W. H. BOWDLEAR & CO.,
147 Pearl Street, BOSTON, MASS., U.S.A.

REVOLUTION IN THE FLY PAPER TRADE.

It must have been observed that for some time the public have become disgusted with the old poisonous fly paper, and have taken somewhat readily to a sticky sort of substitute.

The advertiser has perfected and patented a Fly Paper of this nature, which will certainly be the leading thing in this way in the future. It is a well got-up and effective paper, and is as cleanly to handle as a sheet of note-paper.

In the advertiser's own retail establishment last season the sale of this was simply enormous, as they were freely used by tradespeople (Butchers, bakers, grocers, and confectioners), who would not dare to risk the danger from dead poisoned flies about their stock. Owners of horses and cowkeepers were delighted with them, as they spared the animals the torture from this source.

From the nature of the article it cannot very well be stocked by Wholesale Houses for distribution to the Retail Trade, but the Parcel Post will carry them direct from the maker, and Postal Orders will facilitate remittance.

The price is 4/6 per gross (carriage free), but where a large trade is developed more liberal terms will be given.

Send sample order for small lot, and while the season is on you are bound to do a big thing.

ADDRESS—

S. WILSON, CHEMIST, ST. HELENS, LANC.

FOUND DEAD

BY SANFORD'S RAT POISON.

"I have found 145 rats killed in my farm buildings by it."—C. Wilson Offord. It is the most certain remedy I have ever tried. Little pellets about the size of a pea are put in the rat holes or in their runs. I destroyed over 200 rats from one dressing with it."—C. Cook, Grange Farm, Eilsmere, Salop. It is, without doubt, the best ever introduced. Price 6d., 1s., 2s., and 8s., of Chemists.

SANFORD'S MICE POISON for Houses, Buildings, Corn Stacks, &c. Cannot be excelled. Has given entire satisfaction for the past 25 years. In packets 8d., 1s., and 2s. each, with directions for use, of SANFORD & SON, Sandy, Beds. Liberal terms to Chemists. Wholesale of Barclay & Son, Sanger & Son, Newbery & Sons, Edwards, and others, London (England).

W. CLARK'S SPECIALITIES FOR HOUSE, STABLE, & FIELD.

BOOT TOP FLUID,

For cleansing and preserving Boot Tops, totally eradicating all stains, and restoring their original colour.

Made in five colours—White, Light Brown, Nut Brown, Mahogany, and Pink.

BOOT TOP POLISH

Is a cream to be used after the Fluid to polish the Top. It also nourishes the Leather.

BOOT TOP POWDERS.

IN ALL COLOURS.

These Powders have been before the public for 30 years, giving the highest satisfaction, keeping Boot Tops equal to new. These Powders never turn Black.

SADDLE PASTE.

This preparation is for softening and preserving all kinds of Saddles, Bridles, Driving Reins, and every description of Brown Leather. It cleans, softens, and imparts a handsome appearance.

BREECHES PASTE.

This Matchless Paste for Leather, Kersey, and Cord Breeches, &c., will be found far superior to any that has ever been offered to the public; it will cleanse and beautify, rendering them soft and pliable; does not require rubbing, and will not rub off. Warranted perfectly free from dust, and needs but one trial to prove its superiority over all others.

WATERPROOF HARNESS BLACKING.

Neither requires oil, dye, or any other preparation; and it is the only one ever perfected for preserving, rendering supple, and giving

A POLISH, EQUAL TO PATENT LEATHER, to all kinds of Black Leather Harness, Carriage Heads, Aprons, &c.

None other is used in the Queen's Establishments.

METROPOLITAN POLISH.

For restoring and preserving all kinds of Patent, Enamel, and Morocco Leather; also Brown Leather Boots, &c. It renders them perfectly elastic. It will not attract heat. Likewise for cleaning and restoring Oil Paintings, Carriage Panels, &c. For French Polished, Japanned, and Varnished Goods it will be found unequalled.

NE PLUS ULTRA

RAVEN JET FRENCH VARNISH.

WARRANTED NOT TO CRACK.

It is entirely free from any offensive smell common to most polishes. It instantly produces the most brilliant polish on the ordinary Walking as also Patent Dress Boots and Shoes for morning or evening wear.

ELASTIC WATERPROOF VARNISH.

For Hunting, Shooting, Fishing, or ordinary Walking Boots, Coach and Cab Heads, Phaeton, Gig, Cart Aprons, &c., especially old Enamelled Leather, and for all kinds of Indiarubber Goods, particularly for Goloshes. It will not crack or wear brown. Applied to the soles of boots and shoes they will be proof against wet.

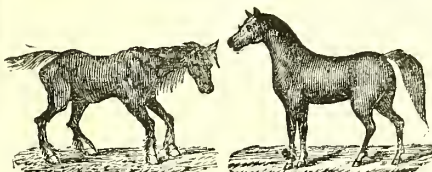
HOPLEMUROMA.



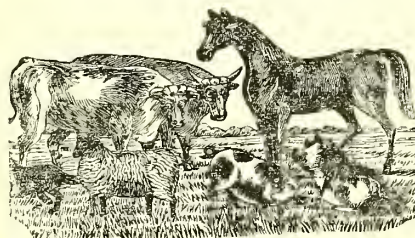
Cures horses' brittle and shelly feet, sand cracks, scedy toes, diseased frogs, fever, quittor, rapidly increasing the growth of the horn, and preventing horses throwing their shoes, making the hoof tough, and prevents all lameness. This preparation is warranted to cure all the above diseases, has been before the public for 30 years, and never known to fail. No owners of horses should be without this invaluable preparation.

MARVELLOUS EMBROCATION.

FOR HORSES AND CATTLE.



Takes away all soreness, and gives immediate relief and speedy cure in cases of lameness, bruises, sores, sprung sinews, sprains, enlarged joints, overreach, splints, curbs and wind galls, also cuts, broken knees, wrung shoulders, sore backs, chapped heels, sore throats, influenza, and rheumatism.



HORSE BALLS—

Fever, Cough, Diuretic, Astringent, Condition, and Alterative.

COLIC DRAUGHTS.

For Flatulent and Spasmodic Colic.

FEVER DRAUGHTS.

For Shivering, Dulness, &c.

CRACKED HEEL LINIMENT.

For Horses.

HEALING LINIMENT.

For Scratches, Cuts, &c.

BLISTERING OINTMENT.

For Splints, Spavins, &c.

CONDITION MEDICINE

ALTERATIVE POWDER.

FEVER POWDERS.

Prepared by W. T. CLARK, M.R.C.V.S.L.

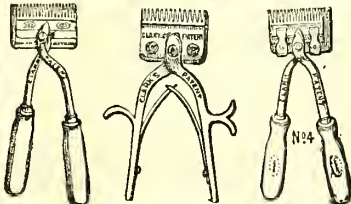
MARVELLOUS EMBROCATION.

FOR DOMESTIC USE.



Cures Bronchitis, Sore Throats, Rheumatism, Lumbago, Wheezing in the Throat or Chest, Sciatica, Sprains, Bruises, &c.

HORSE CLIPPERS.



No. 1. Cutting to be performed by one man only, cutting the human hair.

No. 4.—A two-handed instrument, with the Patent Grasshopper Springs over the plates. This improvement renders the machine simply perfect, producing a softness and ease of motion not to be surpassed.

No. 1.—This well-known Instrument has been before the public for 16 years, and has given universal satisfaction, and is everywhere acknowledged to be by far the best, and therefore the cheapest in the market.

No. 2.—One-handed Clipper for heads, manes, quarters, and difficult parts, leaving one hand at liberty to hold the horse, thus enabling the clipper. This Clipper is also used for

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SOMERSET CHAMBERS, 151 STRAND, LONDON
(NEXT TO SOMERSET HOUSE).*Guides to New Patent Law and Registration gratis.***S. SAINSBURY'S**A Highly-perfumed Scent,
prepared from the finest
ENGLISH LAVENDER,
without any foreign whatever.**Lavender**

176 & 177 STRAND, LONDON.

*Wholesale and Shipping terms on application.***Water.****HOOPING COUGH! HOOPING COUGH!! HOOPING COUGH!!!**

Positively and quickly cured by the New Discovery,

KEMP'S WHOOPALINE

(TRADE MARK.)

Is a certain cure in all cases of Hooping Cough, Bronchial Disorders, and all
affections of the Chest and Lungs. Price 1/1 and 2/9 per bottle.
Prepared only by**W. H. KEMP, 220 Holloway Road, LONDON,**

Wholesale Agents:—

Messrs. BURGOYNE, BURBIDGES & Co., 16 Coleman Street, London, E.C.

PURE CRUSHED LINSEED.

Contains all the Oil. The finest procurable.

Prepared from specially selected seeds.

Sold in 1 cwt. bags, 17s. per cwt., bags free; or in 28 and 56-lb. parcels
18s. per cwt.; also in 1/2 and 1 lb. tins and parchment packets.**IDRIS & CO.**MANUFACTURING CHEMISTS AND MINERAL WATER MAKERS,
ASCHAM STREET, LONDON, N.W.**CARBOLIC POWDER**

IN BAGS, CASKS, OR CANISTERS.

5%, 10%, 15%, and 30%.

EITHER PINK OR WHITE.

SAMPLES AND PRICES ON APPLICATION. [2]

GRINDLEY & CO., POPLAR, LONDON, E.**CARMINE PUR.**Chemists and others requiring Pure Carmine of the FINEST QUALITY
will find this far superior to any other. It is intensely rich and brilliant
in colour, perfectly soluble, and offers great advantage in price.

1 oz., 2s. 3d.; 4 oz., 8s.; 1 lb., 30s., nett cash, free by post.

J. SELLERS, 57 Farringdon Road, London, E.C.**CARMEL.**This Castile Soap is manufactured at Mount Carmel, Palestine, from
pure Olive Oil pressed on the spot. As an emollient for the skin and com-
plexion it is the most ancient and best soap.**AGENTS WANTED IN EVERY TOWN.**

DEPOT FOR GREAT BRITAIN AND COLONIES—

MOUNT CARMEL SOAP CO., 24 Charles Street, LONDON, E.C.
Hatton Garden,**EMP. CERAT. SAPONIS.**

ON FINE SHIRTING, 16 IN. WIDE.

6s. per Dozen net cash.**JOHN QUILLIAM & CO.,** Plaster Works, Manchester.
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[1]

PRECIPITATED CHALK, WHITEST AND PUREST.CHEAPEST SELLERS IN THE MARKET.
ALSO CHEMICALS, DRUGS AND OILS.

APPLY TO

AUG. LEVERMORE & CO.,
8 LIME STREET LONDON, E.C.**CHLORIDE OF GOLD**19/- per dozen
15-grain Tubes
(guaranteed);
Postage, 2d.The best in the market. Immense quantities sold. Exported to all parts
of the World.**LOUIS ROWLAND (Refiner),**
59 South John St., LIVERPOOL.**RUBBER TYPE**On Metal body, perfectly accurate, for instantly making a RUBBER
STAMP for Special Labels, &c., saving expense and delay. Complete
Outfits from 7/6. Send for Specimens and Price List to the Patentee,**E. M. RICHFORD, Dept. C, 44 Snow Hill, London,**

Manufacturer of Rubber Stamps, Presses, the "Nigropadd" and

"Effective" Self-Inking Pads, &c., and Stamp-making Outfits.

Chemists in all parts of the world can add largely to their profits by pushing our
Goods. Liberal terms.

ANALYTICAL AND CONSULTING CHEMIST.

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Assistance given to Manufacturers and others requiring Chemical
knowledge.

Fifty per cent. discount allowed to the Trade.

BOTTLE & PARCEL WAX

AND

DIRECTION TAG MANUFACTURERS.

SAMPLES AND PRICES ON APPLICATION.

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tioning this advertisement, will receive gratis his
Two-Letter Monogram in above style, or his name
in full, for Marking Linen or Paper. Great variety
of Stamps. Specimens free.**VAN HOUTEN & CO.,** Stereotypers in India-rubber,
21 COLEMAN STREET, LONDON, E.C.

J. Houten.

ORANGE WINE

(VIN. AURANT, P.B.)


Specially brewed for Quinine Wine, does not deposit. Is well adapted for Export,
as it will keep good in any climate. In casks, 13, 27, 56, 112, 140 gallons; small
casks 3s. 9d. per gall., carriage allowed. In wine bottles (not less than 3 doz.), at
9s. per doz., including bottles. Cases extra and returnable.
Sample six stamps. Special quotations to large buyers.**GEO. DURRANT & CO., Hertford.****"HOME, SWEET HOME."****QUIBELLS' INFALLIBLE DISINFECTANTS**

AGENTS WANTED WHERE NOT ALREADY APPOINTED.

QUIBELL BROS., Write for Prices and Terms to
Manufacturing Chemists, Newark-on-Trent.

KERNICK'S
LEMON JUICE CORDIAL
 (SWEET OR DRY),
 FRUIT SYRUPS ETC.
 LIST FREE.
KERNICK & SON, CARDIFF.

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HAGUE'S CLINICAL THERMOMETERS.

 Are easily adjusted, have plain, easily-read scale, wide bore, and indestructible index. Sent, post free, in Nickel or Ebonite Case, for 3s. Kew Certificate, 1s. 6d. extra. Magnified Index, 3s. extra. "Half-Minute" C. Thermometers, 4s. each. All Clinical and Surgical Instruments and Appliances of best workmanship at most moderate prices.
J. J. HAGUE, 75 Pentonville Road, LONDON.

HEALTHITAS,
 THE NEW DISINFECTANT, in Powder, Fluid, and Soap, &c.
CHLORIDE OF LIME, in Bulk, or in $\frac{1}{4}$, $\frac{1}{2}$, and 1 lb. Air-tight Packages
CARBOLIC POWDER, from £2 10s. per Ton.
 ✓ **NEW CARBOLIC SANITARY CO., L^D.** ✓
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PUMILINE.

THE ONLY PURE ESSENCE AND
 EXTRACT OF SNOW-GROWN
 PUMILIO PINES.

FOR GOUT, RHEUMATISM, SORE THROAT, CHEST AFFECTIONS.



THE SNOW-GROWN PINUS PUMILIO.

SIR MORELL MACKENZIE wrote, December 9, 1887:—"I have much pleasure in stating that I have made use of Oleum Pumilionis during the last twenty-five years, that I consider it a most valuable preparation. It acts as an admirable tonic to the mucous membrane of the air passages in cases of chronic bronchitis and laryngeal catarrh. I am glad, therefore, to hear that the remedy is about to be used on a large scale, and I have no doubt the results will be highly satisfactory."
 (Signed) "MORELL MACKENZIE, M.D."

PUMILINE ALONE, with the single exception of Pinol, possesses the physical and chemical properties which give it the faculty of being administered internally with **SAFETY**. It is, therefore, essential for Chemists to use Pumiline, as it is the only preparation obtained from snow-grown Pumilio Pines.

FOR TRADE PRICE LISTS, PAMPHLETS, ANALYTICAL REPORTS, &c.—

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CHEESE COLOR
 (ANNATTO.)

BUTTER COLOR.
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CHEESE RENNET.
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THE "EUREKA" COMPANY
 MANUFACTORY
DAIRY PREPARATIONS.

PURITY, UNIFORM QUALITY, AND STRENGTH GUARANTEED.

These preparations will be found to be of the most *excellent quality, pure and strong*, and, manufacturing these specialities *only* and on a *large scale*, we can offer special advantages to *buyers of bulk*.

It will pay to write for samples, and compare quality and price with what you are using.

LONDON OFFICE for U. K. and Colonies
54 CRUTCHED FRIARS, E.C.

MESSRS. JOHNSEN & JØRGENSEN,
 AGENTS WANTED WHERE NOT REPRESENTED.

To whom please apply for samples and particulars

VALUABLE & INTERESTING TO EVERYBODY.
COMPRESSED HOPS.

Best Hops compressed into small parcels of one pound and half-pounds, and sent out in cases containing 30 lbs. each. These Hops are specially selected and compressed for keeping purposes, and will retain their aromatic strength for a considerable time.

They are introduced to the Public to enable them to make their own **BITTERS, YEAST, HOME BREWING** and numerous other purposes. Full particulars given on each packet.

P.S.—Chemists will naturally see the great advantage in making their own Bitters from the Pure Hop itself.

Specially Packed by **A. WILKINSON & SONS, 27 Derby Lane, Old Swan, LIVERPOOL.**
 SAMPLES AND QUOTATIONS ON APPLICATION.

See Agents for Chemists—**EVANS, SONS & CO., Liverpool; EVANS, LESCHER & WEBB, London; EVANS, SONS & MASON, Lim., Montreal.**

AYRTON & SAUNDERS,

Designers and Manufacturers

OF

High-Class Artistic Specialities

FOR CHEMISTS AND DRUGGISTS;

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PATENT LINT, PLAISTERS, AND COTTON WOOL,

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HARD AND SOFT WOOD TURNERS;

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FACTORY—

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All Letters, Orders, &c., to be addressed to the Firm, 149 DUKE STREET.



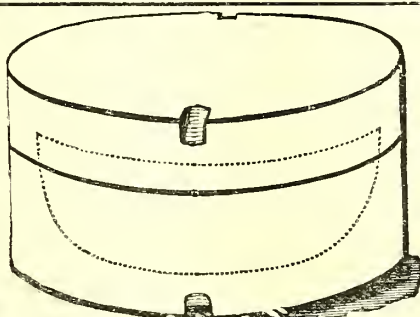
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WILLIAM TOOGOOD'S SPECIALITIES.

WAREHOUSE AND SHOW ROOM,
BURLINGTON BUILDINGS,
BEDDON STREET, REGENT STREET, LONDON, W.

TOOGOOD'S IMPROVED PATENT EARTHENWARE COVERED POTS

*Are claimed to be the most perfect
and convenient yet offered to the Trade.*



Owing to the increasing demand for our Patent Pots, we have introduced a Special THIN Series for Dispensing.

These Pots are beautifully glazed and finished, and, being very light, are specially adapted for sending by post.

ORDINARY THICKNESS—										
1 dr.	2 dr.	$\frac{1}{8}$	$\frac{3}{8}$	1	$1\frac{1}{2}$	2	3	4	6	8 ounces.
$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{7}$	$\frac{1}{8}$	$\frac{1}{10}$	$\frac{2}{2}$	$\frac{2}{10}$	$\frac{3}{4}$	$\frac{4}{6}$	$\frac{5}{6}$ per doz.
THIN for DISPENSING—										
$\frac{1}{8}$	$\frac{3}{8}$	1	$1\frac{1}{2}$	2	3	4	6	8 ounces.		
$\frac{1}{7}$	$\frac{1}{8}$	$\frac{1}{10}$	$\frac{2}{-}$	$\frac{2}{4}$	$\frac{3}{-}$	$\frac{3}{8}$	$\frac{5}{-}$	$\frac{6}{-}$ per doz.		

TOOGOOD'S BURNT-IN POTS, FOR COLD CREAM, TOOTH PASTE, &c.

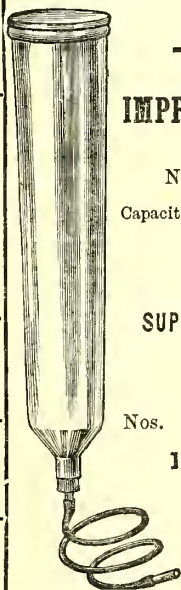
TOOGOOD'S GRADUATED MEASURES.

TOOGOOD'S BOXWOOD-TOP CORK BOTTLES

TOOGOOD'S MEXICAN SQUARES.

TOOGOOD'S GRN-SOLVENT BOTTLE.

TOOGOOD'S POISON BOTTLES.



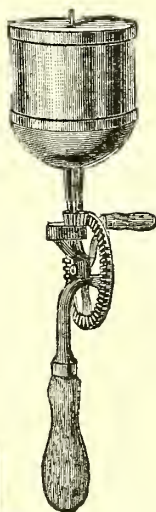
TOOGOOD'S IMPROVED PERCOLATORS.

Nos.	1	2	3	4	5
Capacity	12	25	66	100	160 ozs.
	2/	3/	4/6	6/	7/ each

SUPPORTS FOR ABOVE IN
STAINED WOOD.

Nos.	1	2	3	4	5
	1/9	2/	3/	3/	3/6 each.

NORMAN'S PATENT PILL COATER



The cheapest and most efficient machine yet introduced, combining simplicity with portability, and enabling small quantities of pills to be coated with the same facility as large.

It speedily saves its own cost.

Price 3/6 each.

AUSTRALIAN AGENCY AND SAMPLE ROOM:

MR A. I. JOSEPH, 250 Pitt Street, Sydney.

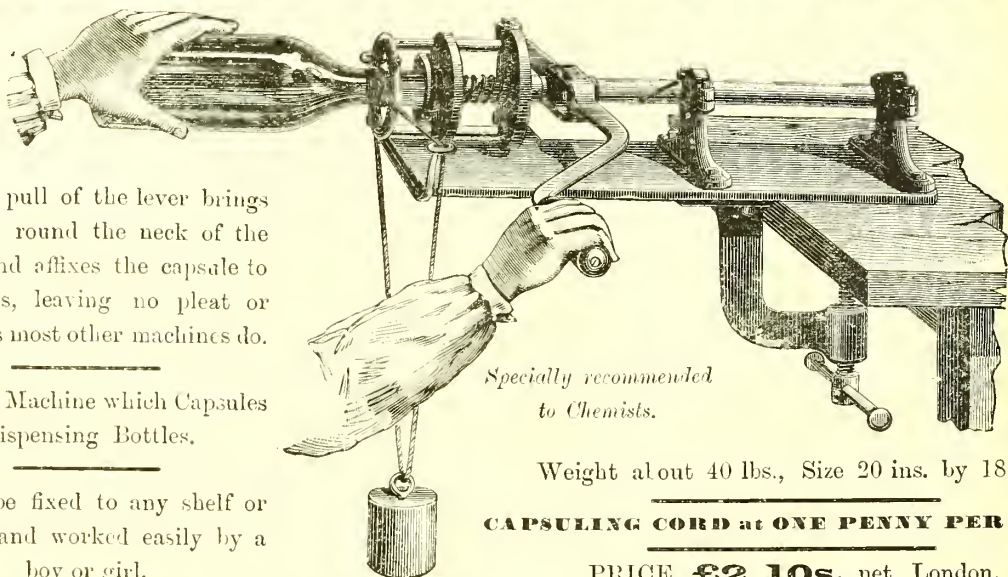
Telegraphic Address: "TOOGOOD LONDON."

Telephone No. 3834.

William Toogood's Price Current of Glass Bottles, Measures, Earthenware, Druggists' Sundries, &c., will be forwarded post free upon application.

SPECIAL ATTENTION GIVEN TO SHIPPING ORDERS.

THE "SIMPLEX" (N.M. PATENT) CAPSULING MACHINE.



A single pull of the lever brings the cord round the neck of the bottle and affixes the capsule to the glass, leaving no pleat or crease, as most other machines do.

The only Machine which Capsules Dispensing Bottles.

It can be fixed to any shelf or counter and worked easily by a boy or girl.

Specially recommended to Chemists.

Weight about 40 lbs., Size 20 ins. by 18 ins.

CAPSULING CORD at ONE PENNY PER YARD.

PRICE £2 10s. net, London.

C. MELIN, 37 CRUTCHED FRIARS, LONDON, E.C.

CARTER'S DISINTEGRATORS

Will Pulverise, Granulate, or Shred almost any Mineral, Vegetable, or Animal Substance.

NEARLY 1,100 IN USE

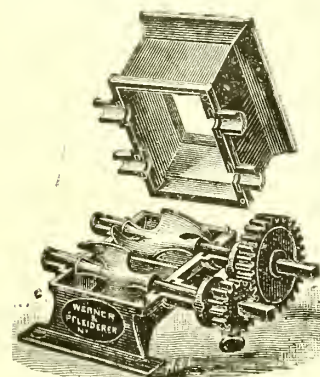
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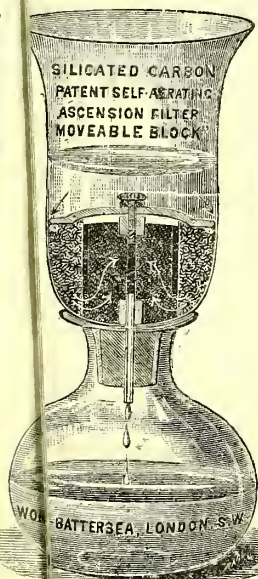
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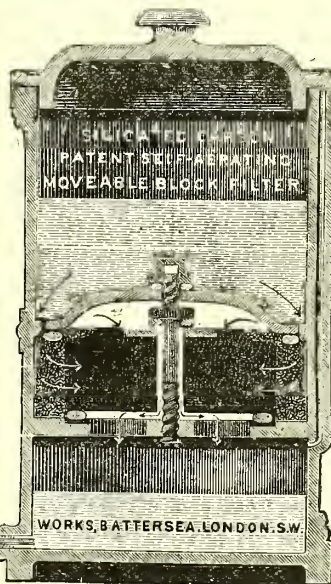
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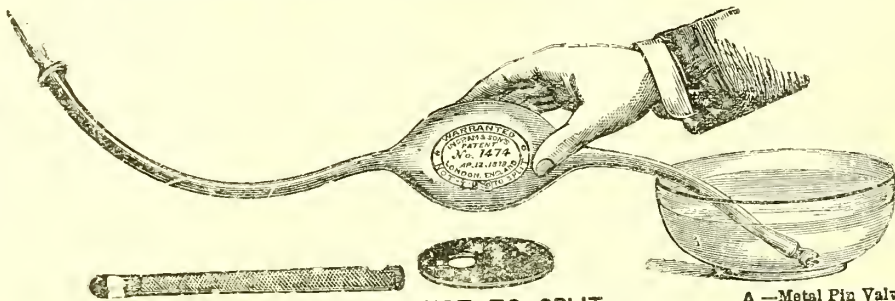
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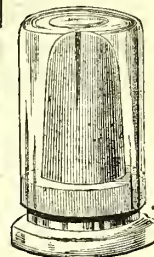
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No.	Per dozen	Size
88. Hard Wood Boxes, Pedestal Shape	2/6	1/
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201. " " " "	3/0	6d.
201B. " " " "	3/11	1/
202. " " " "	Extra Large	1/
203. " " " "	Cone 5/10	1/
204. " " " "	Cone 3/11	1/
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206. Boxwood Boxes, each in box 3/3	4/8	1/
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No.	Per dozen	Size
207B. Boxwood Box, Draughtsman Small	2/9	1/
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209. Nickel Plated Pencil, with Menthol at	4/6	1/
210. Boxwood Boxes, Acorns, Nickel Plated Caps	5/4	1/
211. Vegetable Ivory Boxes	5/10	1/
212. Boxwood Boxes, Bullet Shape, reversible	4/8	1/
213. Menthol Charms for Watch Chains, &c.	2/9	1/
214. Glass Show Bottle, with Cone on Stopper	5/10	1/
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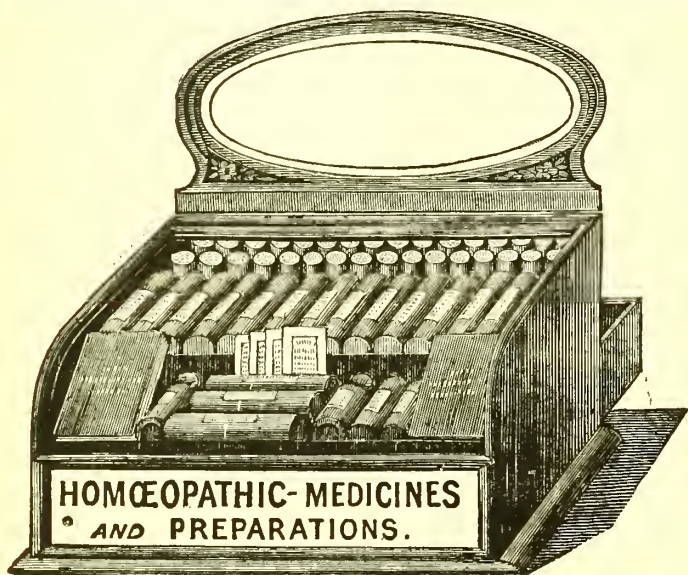
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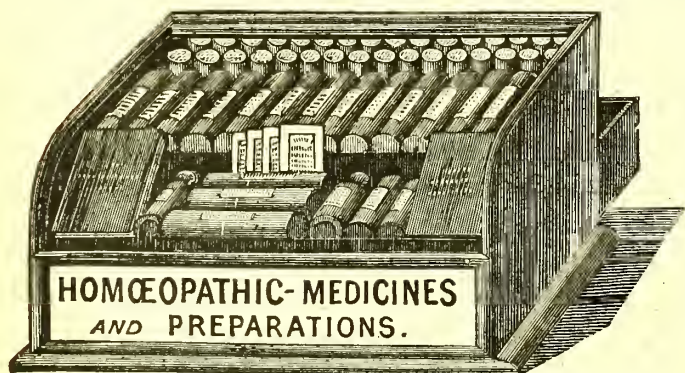
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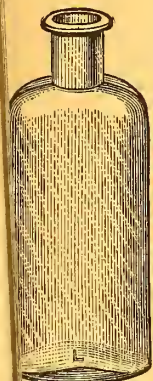
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